“Prepared & Empowered”

Your Ultimate Reviewer for the ICCT Entrance Exam

CAC.Robite

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📘 Introduction

Welcome, future ICCTians! This reviewer is specially crafted for incoming freshmen pursuing a Bachelor of Science in Psychology. As someone who understands the pressure of college entrance exams, I created this guide to help you master key concepts, boost your confidence, and sharpen your test-taking skills. Use this reviewer wisely—pace yourself, take breaks, pray, and believe in your ability. You got this!

📘 English Review Section

📍 Topic 1: Parts of Speech

Understanding the parts of speech is like knowing the roles of actors in a play. Each word has a job, and when we know that job, we can build better, clearer, and more grammatically correct sentences.

The 8 Parts of Speech:

Nouns – Words that name people, places, things, or ideas.

- Examples: psychologist, school, love, brain

Pronouns – Words that replace nouns to avoid repetition.

- Examples: he, she, it, they, we

Verbs – Action words or states of being.

- Examples: run, is, think, analyze

Adjectives – Words that describe nouns or pronouns.

- Examples: intelligent, caring, blue, loud

Adverbs – Words that describe verbs, adjectives, or other adverbs. They often ending in -ly.

- Examples: quickly, extremely, silently, well

Prepositions – Words that show the relationship between a noun (or pronoun) and other words in a sentence.

- Examples: on, under, beside, after, during

Conjunctions – Words that connect words, phrases, or clauses.

- Coordinating: and, but, or, so
- Subordinating: because, although, if

Interjections – Words that express strong emotions or reactions.

- Examples: Wow! Oh no! Hooray!

📍Topic 2: Subject-Verb Agreement

Subject-Verb Agreement simply means that the subject and verb in a sentence must match in number:

👉 If the subject is singular, the verb must be singular.

👉 If the subject is plural, the verb must be plural.

This is one of the most common areas where students lose points, so let's get it right!

🔹 Basic Rules:

1. Singular subject = singular verb
    - The girl runs every morning.
2. Plural subject = plural verb
    - The girls run every morning.

🔹 Rule 1: Ignore Prepositional Phrases

Sometimes, prepositional phrases (like of the class, on the table, under the bed) come between the subject and the verb. Don't be fooled—always match the verb to the main subject, not the object of the preposition.

- ❌ The group of students are noisy.
- ✅ The group of students is noisy.
  (Subject: group — singular)

🔹 Rule 2: Indefinite Pronouns

Some pronouns are always singular, some are plural, and others are tricky!

Always Singular:
Each, everyone, everything, someone, somebody, anyone, anybody, neither, either

- Each of the students has a book.

- Everyone is welcome.

Always Plural:
Few, many, several, both

- Many are coming to the seminar.

Either/Neither depends on the object it refers to.

🔹 Rule 3: Compound Subjects

When subjects are joined by and, they're usually plural:

- CJ and her friends are going to the library.

BUT — if the two nouns refer to one idea or a single unit, they are singular:

- Peanut butter and jelly is my favorite snack.

🔹 Rule 4: Either...or / Neither...nor

The verb agrees with the subject closest to it.

- Neither the teacher nor the students were ready.

- Either the kids or the teacher is at fault.

🔹 Rule 5: There is / There are

These phrases start the sentence, but the verb must still agree with the subject that comes after it.

- There is a book on the table.
- There are books on the table.

✨ QUICK TIPS:

- Cross out prepositional phrases to find the real subject.
- Watch out for “tricky” words like each, everyone, and compound structures like either...or.
- Say the sentence out loud. Often, your ear can catch what looks weird on paper.

📍Topic 3: Sentence Structures

(Simple, Compound, Complex, Compound-Complex)

Understanding sentence structures helps you write clearly and effectively. It's like building blocks—once you know the parts, you can mix and match to make powerful, well-structured writing.

🔹 1. Simple Sentence

A simple sentence has one independent clause. It expresses a complete thought and has a subject and a verb.

Examples:

- She studies every night.

- The cat sleeps.

Even if the sentence has a compound subject or verb, it's still simple as long as there's only one independent clause.

CJ and her friends dance. (Still simple!)

🔹 2. Compound Sentence

A compound sentence has two independent clauses joined by a coordinating conjunction (FANBOYS: For, And, Nor, But, Or, Yet, So).

Examples:

- I studied, and I passed.

- He didn’t go to class, but he read the notes.

The clauses can also be joined by a semicolon:

She was tired; she kept working.

🔹 3. Complex Sentence

A complex sentence has one independent clause and one or more dependent clauses. These are joined by subordinating conjunctions like: because, although, since, when, while, if, unless, after, before

Examples:

- Because I was sleepy, I went to bed early.

- I went to the party even though I was tired.

- After the game ended, we went home.

The dependent clause can come before or after the independent clause.

🔹 4. Compound-Complex Sentence

A compound-complex sentence has two or more independent clauses and at least one dependent clause. This is the most advanced sentence type.

Examples:

- Although she was tired, she cooked dinner, and he cleaned the table.

- I didn’t sleep because I was stressed, but I still went to school.

Type	# of Independent Clauses	# of Dependent Clauses	Common Markers
Simple	1	0	–
Compound	2+	0	FANBOYS / ;
Complex	1	1+	Because, Although, Since, etc.
Compound-Complex	2+	1+	Combo of both

📝 Mini Quiz 1 – English: Topics 1 to 3

Instructions: Choose the best answer. Each item is worth 1 point.

---

1. What part of speech is the word “carefully”?

A. Noun
B. Verb
C. Adjective
D. Adverb

---

2. Identify the subject-verb agreement error:

A. The class meets every Monday.
B. He and his friend goes to church.
C. They were watching a movie.
D. My mom bakes cookies on weekends.

---

3. Which of the following is a compound sentence?

A. She laughed.
B. She laughed and cried.
C. She laughed, and he cried.
D. Because she laughed, he cried.

---

4. Which sentence uses the correct verb form?

A. The students was excited.
B. Each of the boys have a toy.
C. The dog chases its tail.
D. They goes to the park every day.

---

5. What part of speech is the word “until”?

A. Conjunction
B. Preposition
C. Adverb
D. Noun

---

6. Which sentence is complex?

A. I study hard.
B. She plays the guitar and sings.
C. I study hard because I want to pass.
D. I study hard and I want to pass.

---

7. Choose the correct verb to complete the sentence:

“Neither of the girls ____ late.”

A. are
B. were
C. is
D. have

---

8. What part of speech is the word “but” in the sentence: “He is strict but fair”

A. Adjective
B. Verb
C. Conjunction
D. Adverb

---

9. Which of the following is a simple sentence?

A. While I waited, I checked my phone.
B. He ran to the store.
C. She runs fast, but she gets tired easily.
D. They like ice cream, and they love cake.

---

10. Choose the correct subject-verb pair:

A. The group of friends are loud.
B. Each player have a uniform.
C. The dogs barks at night.
D. That girl dances gracefully.

📍 Topic 4: Tenses of Verbs

Verb tenses show when an action happens—past, present, or future. In entrance exams, spotting the correct tense is 🔑 to choosing the right answer and avoiding awkward sentences.

🔹 1. Present Tense

Used for actions happening now or for general truths and habits.

Examples:

- She walks to school.
- The sun rises in the east.
- Psychologists study human behavior.

🔹 2. Past Tense

Used for actions that already happened in the past.

Examples:

- He studied for the test.

- They watched a movie last night.

Regular Verbs: Add -ed (play → played)
Irregular Verbs: Change spelling (go → went, eat → ate)

🔹 3. Future Tense

Used for actions that will happen in the future. Usually formed with will + base verb or is/are going to.

Examples:

- She will join the organization.

- They are going to take the exam next week.

🔹 4. Present Perfect Tense

Used for actions that happened at an unspecified time before now or that started in the past and continue to the present. Formed with has/have + past participle.

Examples:

- I have studied psychology before.

- She has visited the campus many times.

🔹 5. Past Perfect Tense

Used for actions that were completed before another action in the past. Formed with had + past participle.

Example:

- She had already left when I arrived.

- They had studied before the teacher gave the quiz.

🔹 6. Future Perfect Tense

Used for actions that will have been completed before a certain point in the future. Formed with will have + past participle.

Examples:

- By tomorrow, I will have finished the reviewer.

- She will have graduated by next year.

✨ QUICK VERB TENSE CHART:

Tense	Formula	Example
Present	base verb / verb + s/es	She studies.
Past	verb + ed (or irregular)	They walked. / She ate.
Future	will + base verb	I will review.
Present Perfect	has/have + past participle	He has passed.
Past Perfect	had + past participle	She had left.
Future Perfect	will have + past participle	They will have graduated.

📍 Topic 5: Pronoun-Antecedent Agreement

Pronoun-Antecedent Agreement means that a pronoun must match its antecedent (the noun it replaces) in both number and gender.

If the noun is singular, the pronoun should be singular.
If the noun is plural, the pronoun should be plural.
If the noun is a boy, use “he.” If it’s a girl, use “she.”
If it’s a group of people or neutral, use “they.”

🔹 What’s an Antecedent?

An antecedent is the word the pronoun refers to.

Example:

- CJ forgot her notes. → “CJ” is the antecedent of “her.”

- The students finished their test. → “students” is the antecedent of “their.”

🔹 Rule 1: Match in Number

- The boy lost his pencil. ✔️

- The girls shared their answers. ✔️

❌ The student lost their pen.
✅ The student lost his or her pen. (if gender is unknown)

🔹 Rule 2: Watch for Compound Subjects

Example:

- Romel and Kevin brought their guitars. ✔️

Because we're talking about two people (plural), we use "their."

🔹 Rule 3: Indefinite Pronouns

Some indefinite pronouns are always singular, so they take his/her even if the gender isn't known.

Always Singular:
Each, everyone, everybody, someone, somebody, anyone, anybody, no one, nobody

Examples:

- Everyone should bring his or her ID. ✔️

- Each student wrote his or her name. ✔️

(Yes, it's long, but it's grammatically correct. In modern usage, "they" is sometimes used as a singular pronoun for gender neutrality—but formal tests still expect "his or her.")

🔹 Rule 4: Collective Nouns

Treat a group acting as a single unit as singular:

- The team celebrated its victory. ✔️

- The jury gave its verdict. ✔️

If the group is acting as individuals:

- The team changed their uniforms. ✔️

✨ QUICK FIX TIPS:

✅ Identify the noun first
✅ Check if it’s singular or plural
✅ Match the pronoun in number and gender
✅ Watch out for words like “each” and “everyone” — they’re singular!

📍Topic 6: Active and Passive Voice

Voice refers to whether the subject of the sentence is doing the action (Active) or receiving the action (Passive). Knowing the difference helps you write clearer, more direct sentences—and ace test questions that ask you to "change to passive" or "choose the sentence in active voice."

🔹 Active Voice

In active voice, the subject does the action of the verb. This is the most direct and natural sentence construction.

Structure:
Subject + Verb + Object

Examples:

- The student answered the question.
- CJ wrote a beautiful essay.
- They cleaned the room.

👉 This is clear and strong. Most writing uses active voice.

🔹 Passive Voice

In passive voice, the subject receives the action. The focus is on the object, not the doer.

Structure:

Object + form of “to be” + Past Participle + (by + subject)

Examples:

- The question was answered by the student.
- A beautiful essay was written by CJ.
- The room was cleaned by them.

Passive is often used when:

- The doer is unknown
  “The window was broken.”
- The focus is on the action or result, not the person
  “The law was passed in 2009.”

🔄 Changing Active to Passive:

Let’s try one together:

Active:

The chef cooked the meal.

Passive:

The meal was cooked by the chef.

Notice how the object “meal” became the new subject in passive voice.

✨ QUICK HACKS:

Active Voice	Passive Voice
The dog chased the cat.	The cat was chased by the dog.
She wrote the report.	The report was written by her.
They built a house.	A house was built by them.

🔔 Use passive voice only when it improves clarity or when the doer doesn't matter. Otherwise, stick to active for punchier writing!

📝 Mini Quiz 2 – English Topics 4 to 6

Instructions: Choose the best answer for each item.

---

1. Which sentence is in the past perfect tense?

A. She eats lunch every day.
B. She ate lunch already.
C. She had eaten lunch before the bell rang.
D. She was eating lunch at noon.

---

2. What is the correct verb tense?

By the time the teacher arrives, we ____ the assignment.

A. finished
B. will finish
C. had finished
D. will have finished

---

3. Choose the sentence with correct pronoun-antecedent agreement.

A. Every student must bring their ID.
B. Each of the girls forgot their pen.
C. Everyone must submit his or her report.
D. Somebody left their phone.

---

4. Which sentence contains a pronoun-antecedent agreement error?

A. The team celebrated its victory.
B. Neither of the boys remembered his lines.

C. All of the students submitted his homework.
D. Everyone in the room raised his or her hand.

---

5. Identify the sentence in active voice.

A. The food was prepared by the chef.
B. The homework was finished by the student.
C. The student finished the homework.
D. The test was passed by the class.

---

6. What is the passive voice form of this sentence: “The nurse checked the patient”?

A. The patient checks the nurse.
B. The nurse was checked by the patient.
C. The patient was checked by the nurse.
D. The nurse has been checking the patient.

---

7. Choose the sentence that uses future perfect tense.

A. She will eat dinner at six.
B. She had eaten dinner before the movie.
C. She eats dinner early.
D. She will have eaten dinner by 7 PM.

---

8. What pronoun correctly completes the sentence?

“Neither of the students forgot ____ assignment.”

A. their
B. his or her
C. our
D. its

---

9. Which sentence is written in passive voice?

A. CJ answered the test.
B. The teacher discussed the lesson.
C. The results were announced by the dean.
D. I cleaned the laboratory.

---

10. Which of the following is in the present perfect tense?

A. I have studied for the quiz.
B. I study every weekend.
C. I studied last night.
D. I will study later.

📍 Topic 7: Modifiers and Word Order

Modifiers are words, phrases, or clauses that add description or detail to a sentence. They modify (or describe) other words.

There are two types:

- 🔹 Adjectives – modify nouns/pronouns (beautiful girl, tired eyes)
- 🔹 Adverbs – modify verbs, adjectives, or other adverbs (quickly ran, very kind)

✨ Modifier Placement Matters

Putting modifiers in the wrong place leads to confusing or funny sentences—called misplaced modifiers.

❌ She almost drove her kids to school every day.
(Did she almost drive, or did she almost drive her kids?)

✅ She drove her kids to school almost every day.

Another error is the dangling modifier—when the modifier doesn't clearly point to what it's modifying.

❌ Running to school, my backpack broke.
(Your backpack ran to school?! 😂)
✅ While I was running to school, my backpack broke.

👉 Always place your modifiers near the word they describe.

📍 Topic 8: Context Clues

Context clues help you figure out the meaning of a word based on how it's used in a sentence or paragraph. This skill is crucial for reading comprehension and vocabulary tests.

There are several types:

- 1. Definition Clue

The word is defined in the sentence.

A habitat, or natural home, is where an animal lives.

- 2. Synonym Clue

A similar word is nearby.

She felt elated, just like she did when she was overjoyed last year.

- 3. Antonym Clue

The opposite is given.

Unlike his hostile coworker, Jacob was very friendly.

- 4. Example Clue

Examples are given to explain the word.

Celestial bodies, such as the sun, moon, and stars, are fascinating.

- 5. Inference Clue

You have to "guess" the meaning based on the whole sentence.

Even after failing many times, she remained resilient and kept trying.

👉 Practice identifying these while reading passages or questions!

📍 Topic 9: Synonyms and Antonyms

These are often tested in vocabulary sections—and being quick with them gives you the edge.

🔹 Synonyms = Words with similar meanings

Happy = joyful, cheerful, glad
Quick = fast, speedy, rapid

🔹 Antonyms = Words with opposite meanings

Big ↔ small
Accept ↔ reject

Sometimes context changes a word's tone, so always double-check the sentence if you're unsure.

📍Common College-Level Synonyms & Antonyms (Philippines Context)

🔹 1. Abundant

- Synonym: Plentiful, Ample, Overflowing
- Antonym: Scarce, Limited, Insufficient

Example: The researcher had abundant data to support the hypothesis.

🔹 2. Advocate

- Synonym: Supporter, Proponent, Defender
- Antonym: Opponent, Critic, Detractor

Example: She is a mental health advocate among Filipino youth.

🔹 3. Comply

- Synonym: Obey, Adhere, Conform
- Antonym: Defy, Disobey, Resist

Example: Students must comply with school rules at ICCT.

🔹 4. Diligent

- Synonym: Hardworking, Persevering, Industrious
- Antonym: Lazy, Negligent, Careless

Example: Filipino scholars are known for being diligent in their studies.

🔹 5. Inevitable

- Synonym: Unavoidable, Certain, Bound to happen
- Antonym: Avoidable, Preventable, Uncertain

Example: Stress is an inevitable part of college life, but manageable.

🔹 6. Emerge

- Synonym: Appear, Surface, Arise
- Antonym: Disappear, Fade, Subside

Example: Many new leaders emerge during school elections.

🔹 7. Pivotal

- Synonym: Crucial, Essential, Significant
- Antonym: Minor, Insignificant, Unimportant

Example: Senior high school grades are pivotal in passing college entrance exams.

🔹 8. Comprehend

- Synonym: Understand, Grasp, Perceive
- Antonym: Misunderstand, Misinterpret, Ignore

Example: Reading comprehension tests your ability to comprehend texts quickly.

🔹 9. Ethical

- Synonym: Moral, Righteous, Just
- Antonym: Immoral, Corrupt, Unjust

Example: Psychology students must uphold ethical standards in research.

🔹 10. Resilient

- Synonym: Tough, Strong, Adaptable
- Antonym: Fragile, Weak, Vulnerable

Example: Filipino youth are known for being resilient despite adversity.

🔹 11. Substantiate

- Synonym: Prove, Validate, Confirm
- Antonym: Disprove, Refute, Deny

Example: You must substantiate your claims in a research paper.

🔹 12. Analyze

- Synonym: Examine, Evaluate, Break down
- Antonym: Ignore, Overlook, Skim

Example: Psych majors often analyze human behavior.

🔹 13. Ambiguous

- Synonym: Vague, Unclear, Obscure
- Antonym: Clear, Definite, Explicit

Example: The survey question was too ambiguous to answer accurately.

🔹 14. Assertive

- Synonym: Confident, Bold, Self-assured

- Antonym: Timid, Shy, Passive

Example: Counselors must be assertive but compassionate.

🔹 15. Collaborate

- Synonym: Cooperate, Team up, Work together

- Antonym: Oppose, Disagree, Sabotage

Example: Students are encouraged to collaborate on group projects.

🔹 16. Conform

- Synonym: Adapt, Follow, Adjust

- Antonym: Rebel, Resist, Deviate

Example: Peer pressure often pushes teens to conform to social norms.

🔹 17. Disparity

- Synonym: Inequality, Difference, Gap

- Antonym: Similarity, Equality, Balance

Example: There is a disparity in access to mental health services.

🔹 18. Facilitate

- Synonym: Assist, Enable, Make easier
- Antonym: Hinder, Obstruct, Block

Example: Teachers facilitate learning through discussion.

🔹 19. Ironic

- Synonym: Paradoxical, Unexpected, Contradictory
- Antonym: Predictable, Straightforward, Expected

Example: It’s ironic that the quietest student became the class president.

🔹 20. Meticulous

- Synonym: Careful, Thorough, Precise
- Antonym: Careless, Messy, Inaccurate

Example: Researchers must be meticulous in recording data.

🔹 21. Novel

- Synonym: New, Original, Innovative
- Antonym: Common, Traditional, Routine

Example: The student proposed a novel solution to a common problem.

🔹 22. Oblivious

- Synonym: Unaware, Ignorant, Unmindful
- Antonym: Aware, Conscious, Attentive

Example: She was oblivious to the growing tension in the room.

🔹 23. Pragmatic

- Synonym: Practical, Realistic, Sensible
- Antonym: Idealistic, Unrealistic, Impractical

Example: The guidance counselor gave pragmatic advice.

🔹 24. Redundant

- Synonym: Repetitive, Unnecessary, Excessive
- Antonym: Concise, Essential, Needed

Example: Remove redundant words in your thesis draft.

🔹 25. Suppress

- Synonym: Restrain, Hold back, Inhibit
- Antonym: Express, Release, Reveal

Example: Don’t suppress your emotions—talk it out.

🔹 26. Tentative

- Synonym: Uncertain, Hesitant, Provisional
- Antonym: Certain, Confident, Definite

Example: They set a tentative date for the defense.

🔹 27. Ubiquitous

- Synonym: Everywhere, Widespread, Universal
- Antonym: Rare, Uncommon, Scarce

Example: Social media is ubiquitous among Gen Z students.

🔹 28. Vindicate

- Synonym: Justify, Clear, Prove right
- Antonym: Blame, Accuse, Condemn

Example: The evidence helped vindicate the wrongly accused student.

🔹 29. Zealous

- Synonym: Passionate, Enthusiastic, Devoted

- Antonym: Indifferent, Uninterested, Apathetic

Example: She was zealous about promoting mental health awareness.

🔹 30. Abhor

- Synonym: Hate, Detest, Loathe

- Antonym: Love, Admire, Adore

Example: Many people abhor cheating in academics.

📝 Mini Quiz 3 – English: Topics 7 to 9

Instructions: Choose the best answer for each item.

---

1. Which sentence contains a misplaced modifier?

A. She quickly finished her test before the bell rang.
B. Covered in chocolate, the kids devoured the cake.
C. While I was studying, my phone buzzed.
D. He walked silently into the room.

---

2. Choose the correctly ordered sentence:

A. After walking in the rain, wet and cold the boy entered the room.
B. Wet and cold, the boy entered the room after walking in the rain.
C. The boy entered the wet and cold after walking in the rain room.
D. Entered the boy room cold and wet after walking in the rain.

---

3. What is the best meaning of the word “frugal” in this sentence?

“Despite earning a lot, she remained frugal with her spending.”

A. Wasteful
B. Generous
C. Careful with money
D. Wealthy

---

4. What type of context clue is used here?

“Marine animals such as dolphins, whales, and seals live in saltwater.”

A. Definition
B. Antonym
C. Example
D. Inference

---

5. Based on the sentence, what does the word “resilient” most likely mean?

“Even after failing her exam twice, she remained resilient and took it again.”

A. Easily discouraged
B. Brave and silent
C. Strong and determined
D. Doubtful and hesitant

---

6. Which word is the synonym of “substantiate”?

A. Argue
B. Deny
C. Prove
D. Ignore

---

7. What is the antonym of “ambiguous”?

A. Vague
B. Confusing

C. Clear
D. Hidden

---

8. Choose the sentence with a correct modifier:

A. I saw a pigeon on the way to school with blue feathers.
B. On the way to school, I saw a pigeon with blue feathers.
C. I with blue feathers saw a pigeon on the way to school.
D. With blue feathers, a pigeon I saw on the way to school.

---

9. What is the synonym of “zealous”?

A. Lazy
B. Disinterested
C. Passionate
D. Bored

---

10. Which sentence uses an antonym clue for the bold word?

“Unlike his hostile sister, Miguel is very friendly.

A. He is so hostile during arguments.
B. Hostile people are aggressive and mean.
C. Miguel was friendly because of his hostile sister.
D. Unlike his hostile sister, Miguel is very friendly.

📍 Topic 10: Reading Comprehension (Passages & Analysis)

Reading comprehension tests your ability to understand, analyze, and interpret what you read. You'll be asked about:

- **Main idea**
- **Supporting details**
- **Inference (reading between the lines)**
- **Author's tone or purpose**
- **Vocabulary in context**
- **Logical flow or paragraph organization**

🔹 Tips:

1. Read the questions first before the passage.
2. Underline keywords or dates.
3. Don't assume—stick to what's stated or implied.
4. Pay attention to transition words like however, therefore, although.

📘 Sample Passage 1

"Though many think that multitasking increases productivity, research shows otherwise. Studies suggest that switching between tasks reduces efficiency and increases mistakes. Psychologists believe the human brain functions best when focused on a single task at a time."

Q1: What is the main idea of the passage?
A. People prefer to multitask.
B. Multitasking makes people more productive.
C. Research shows that multitasking is ineffective. ✅
D. Psychologists like working alone.

Q2: What is the tone of the author?
A. Biased
B. Persuasive ✅
C. Indifferent
D. Sarcastic

Q3: What can be inferred about multitasking?
A. It's a useful skill for emergencies.
B. It makes the brain work better.
C. It should be done more often.
D. It leads to more mistakes and less efficiency. ✅

📘 Sample Passage 2

"Social media has transformed how people communicate. While it offers instant connection, it also contributes to shorter attention spans and increased anxiety. Experts recommend balancing screen time with offline activities to maintain mental health."

Q1: What is the main idea of the passage?
A. Social media is evil.
B. Experts love social media.
C. Social media affects mental health and should be used in moderation. ✅
D. Everyone should stop using the internet.

Q2: What is the tone of the author?
A. Angry

B. Balanced ✅
C. Excited
D. Disappointed

Q3: What can be inferred about social media use?
A. It's completely safe.
B. It's dangerous and should be banned.
C. It has both benefits and risks. ✅
D. It increases mental strength.

📘 Sample Passage 3

"The University of Rizal System (URS) has launched a scholarship program aimed at helping low-income but high-performing students. The initiative provides financial aid, mentorship, and access to campus resources. It reflects the school's commitment to making education accessible to all."

Q1: What is the main idea of the passage?
A. URS is expensive.
B. URS opened a new building.
C. URS created a program to support deserving students financially. ✅
D. URS only accepts rich students.

Q2: What is the tone of the author?
A. Critical
B. Admiring ✅
C. Skeptical
D. Indifferent

Q3: What can be inferred about the school's priorities?
A. URS cares about money more than students.
B. URS values inclusivity and academic excellence. ✅
C. URS only accepts scholars.
D. URS is competing with private schools.

📍 Topic 11: Vocabulary Building (Common Academic Words)

This section includes words that show up in lectures, research, essays, and exams. Expect formal and subject-related terms. These words are often used across disciplines — especially in readings and essay instructions.

📍 20 Common Academic Words (With Examples & Tips)

Word	Meaning	Example Sentence	Prefix/Suffix Tip
Analyze	Examine in detail	Psychologists analyze behavior using case studies.	-lyze = to break down
Indicate	Show or signal	The test results indicate a decline in attention span.	in- = into
Interpret	Explain the meaning	Can you interpret the results of this experiment?	inter- = between
Assess	Evaluate or judge	Teachers assess student performance through exams.	-ess = act of doing

Demonstrate	Show clearly	The speaker demonstrated effective communication skills.	demo- = show
Establish	Set up or create	The school established a new research center.	-ish = to make
Evaluate	Judge the value of	The therapist will evaluate the patient's emotional health.	-ate = cause to
Justify	Give reasons for	You must justify your answer with evidence.	-fy = make/do
Identify	Recognize or name	Can you identify the key concepts in this theory?	id- = same / -fy = do
Compare	Examine similarities	The paper compares classical and operant conditioning.	com- = together

Contrast	Examine differences	The essay contrasts introversion and extroversion.	con- = against
Affect	Influence or impact	Lack of sleep can affect memory and focus.	-fect = make/do
Conduct	Carry out	Researchers conducted an experiment on sleep cycles.	con- = together
Define	Give the meaning	Please define the term “cognitive dissonance.”	de- = down / -ine = to act
Function	Purpose or role	The function of the brain’s frontal lobe is decision-making.	-tion = noun of action
Modify	Change or adjust	The instructions must be modified for children.	mod- = change / -fy = do
Clarify	Make clear	Please clarify your answer.	-fy = to make

Synthesize	Combine into a whole	The student synthesized information from different sources.	syn- = together / -ize = do
Signify	Represent or mean	Red signifies danger in most warning systems.	sign- = symbol / -fy = make
Transform	Change significantly	Education can transform a student's life.	trans- = across

---

🧠 Study Tip: Try to group words by suffix ("-fy," "-ate," "-tion") to remember how their meanings work together. It's a major cheat code for decoding new words in exams!

📍 Topic 12: Idioms & Figures of Speech

Idioms and figures of speech are everywhere — in Filipino conversations, English exams, and even academic articles. Understanding them means grasping non-literal meaning and emotional tone.

🔹 Common Idioms in Philippine Context:

Idiom	Meaning	Example
Break a leg	Good luck	Break a leg on your entrance test!
Piece of cake	Very easy	That quiz was a piece of cake.
Hit the books	Study hard	Time to hit the books before the exam.
Cost an arm and a leg	Very expensive	That psych textbook costs an arm and a leg!
Under the weather	Feeling sick	I couldn't attend class, I was under the weather.

🔹 Common Figures of Speech (Test-Favorite!)

Type	Definition	Example
Simile	*Comparing using like or as*	*Her mind is like a sponge.*
Metaphor	*Direct comparison*	*Time is a thief.*
Personification	*Giving human traits to objects*	*The wind whispered secrets.*
Hyperbole	*Exaggeration*	*I studied for a thousand hours!*
Irony	*Opposite of what's expected*	*The fire station burned down.*

⚡ Mastering these adds depth to your comprehension and essay writing.

📘 ICCT English Entrance Exam Sample – 50 Items

Prepared by: Charl Ann Cloe Robite

Instructions: Choose the best answer for each item. Topics include Parts of Speech, Subject-Verb Agreement, Sentence Structures, Tenses, Pronouns, and more.

---

1. What part of speech is the word “benevolence”?

A. Verb
B. Noun
C. Adjective
D. Adverb

---

2. Which is an example of a pronoun?

A. Run
B. Happy
C. They
D. Chair

---

3. Choose the verb in the sentence: “She studies every night.”

A. She
B. Studies
C. Every
D. Night

---

4. What is the function of an adjective?

A. Describe verbs
B. Replace nouns
C. Describe nouns
D. Show action

5. Which is an interjection?

A. On
B. Wow
C. Under
D. It

---

6. Which sentence uses correct subject-verb agreement?

A. The students walks fast.
B. He go to school.
C. She walks alone.
D. They goes there.

---

7. Each of the boys ____ a basketball.

A. have
B. has
C. are
D. were

---

8. Neither the dog nor the cats ____ hungry.

A. is
B. was
C. are
D. has

---

9. The data ____ accurate.

A. seem
B. seems

C. is
D. has

---

10. Nobody ____ the answer.

A. know
B. knows
C. knowing
D. known

---

11. Which is a compound sentence?

A. He ate lunch.
B. She studies and he plays.
C. While I slept, he left.
D. Go now!

---

12. Identify the complex sentence:

A. I am tired.
B. She left, and I cried.
C. Because I was sick, I stayed home.
D. He ran and jumped.

---

13. Choose the compound-complex sentence:

A. She dances.
B. I slept after I studied, and she cooked dinner.
C. I run daily.
D. Although I was tired.

---

14. Which is a simple sentence?

A. After the movie ended.
B. She smiled.
C. Because she was late, she ran.
D. I went to the mall and bought shoes.

---

15. What is a clause that can stand alone called?

A. Dependent clause
B. Phrase
C. Independent clause
D. Modifier

---

16. What tense is the sentence: “She had been studying”?

A. Present perfect
B. Past continuous
C. Past perfect continuous
D. Future perfect

---

17. Which is in present perfect tense?

A. She studies
B. She studied
C. She has studied
D. She will study

---

18. Identify the future tense sentence:

A. She reads.
B. She read.

C. She is reading.
D. She will read.

---

19. Choose the sentence in past perfect tense:

A. He has arrived.
B. He had arrived before noon.
C. He arrives.
D. He is arriving.

---

20. What is the tense of: “She was cooking when I arrived”?

A. Present
B. Past continuous
C. Future
D. Perfect

---

21. Everyone should bring ____ own pen.

A. their
B. his or her
C. his
D. they’re

---

22. Each student needs ____ ID card.

A. their
B. his or her
C. your
D. they

---

23. If anyone calls, tell ____ I'm not home.

A. him
B. them
C. her
D. him or her

---

24. All of the players took ____ positions.

A. his
B. her
C. their
D. its

---

25. Neither of the men brought ____ tools.

A. their
B. his
C. her
D. them

26. Which sentence uses the past perfect tense?

A. She has eaten lunch.
B. She had eaten lunch before the bell rang.
C. She eats lunch every day.
D. She will have eaten lunch.

---

27. Identify the correct subject-verb agreement:

A. The list of items are on the table.
B. The list of items is on the table.
C. The lists of item is on the table.
D. The list of item are on the table.

---

28. Choose the correct pronoun-antecedent match:

A. Every student must complete their project.
B. Every student must complete his or her project.
C. Every student must complete our project.
D. Every student must complete your project.

---

29. Which sentence contains an adverb?

A. The girl is smart.
B. The girl studied silently.
C. The girl wore a uniform.
D. The girl has books.

---

30. What type of sentence is this: “She smiled and waved goodbye”?

A. Simple
B. Compound
C. Complex
D. Compound-complex

---

31. Which sentence is in the active voice?

A. The ball was thrown by the pitcher.
B. The pitcher threw the ball.

C. The ball is being thrown.
D. The ball will be thrown.

---

32. Which is a coordinating conjunction?

A. Although
B. But
C. Because
D. Since

---

33. Identify the word with a prefix meaning “against”:

A. Submarine
B. Antisocial
C. Preview
D. Reheat

---

34. Choose the word that is an antonym of “expand”:

A. Enlarge
B. Extend
C. Contract
D. Spread

---

35. Which word is a synonym of “intelligent”?

A. Silly
B. Clever
C. Weak
D. Unaware

---

36. What is the tone of this sentence: “She kindly offered help to the struggling student”?

A. Rude
B. Neutral
C. Encouraging
D. Sarcastic

---

37. What does the word “conclude” mean in academic writing?

A. Start the topic
B. Explain definitions
C. End or summarize
D. Argue with others

---

38. What is the main idea of a paragraph?

A. The least important idea
B. The title of the story
C. The general point or focus
D. A random detail

---

39. “Because the test was hard, she studied more.” What kind of sentence is this?

A. Simple
B. Complex
C. Compound
D. Compound-Complex

---

40. What does “context clues” help you do?

A. Spell a word
B. Draw conclusions
C. Define unfamiliar words
D. Memorize sentences

41. Which of the following is a figure of speech?

A. The grass is green.
B. He’s as fast as lightning.
C. I drink water daily.
D. The dog barked loudly.

---

42. What does the idiom “hit the books” mean?

A. To throw books
B. To study hard
C. To fall asleep
D. To borrow books

---

43. Identify the passive sentence:

A. She reads the book.
B. The book was read by her.
C. She is reading.
D. She has read it.

---

44. What kind of conjunction is “although”?

A. Coordinating
B. Subordinating
C. Correlative
D. Transitional

---

45. Choose the correct verb tense: “By next week, we ____ the project.”

A. complete
B. completed

C. will have completed
D. have completed

---

46. What does “synthesize” mean in academic tasks?

A. Memorize words
B. Copy from texts
C. Combine ideas
D. Write summaries

---

47. Which is a formal academic word for “prove”?

A. Show
B. Demonstrate
C. Tell
D. Argue

---

48. Choose the sentence that best shows inference:

A. She wore a raincoat and carried an umbrella.
B. It rained yesterday.
C. She hates the rain.
D. Umbrellas are expensive.

---

49. Which sentence best reflects the author’s tone as “critical”?

A. The system works perfectly.
B. The system has many flaws and needs improvement.
C. Everyone loves the system.
D. The system is widely appreciated.

---

50. Which word would most likely appear in a Psychology research article?

A. Character
B. Behavior
C. Picture
D. Walk

✅ English Mini Quiz Answer Key

📍 Mini Quiz 1: Parts of Speech, Subject-Verb Agreement, Sentence Structures

1. B – Adverb
2. C – Compound sentence
3. A – The students walks to class.
4. C – Because
5. B – Adverb
6. B – Complex sentence
7. B – Has
8. B – Conjunction
9. C – We enjoy our time
10. C – Complex

📍 Mini Quiz 2: Tenses, Pronoun-Antecedent, Voice

1. C – Present Perfect Tense
2. A – Past Continuous Tense
3. B – Had
4. B – Her
5. C – Will be
6. A – Past Perfect
7. B – Future Perfect
8. B – Passive
9. B – Her
10. B – Present Tense

📍 Mini Quiz 3: Modifiers, Context Clues, Synonyms/Antonyms

1. B – “Extremely” modifies “difficult”
2. D – “Sluggish” most likely means slow
3. C – Humble : Modest
4. A – Benevolent : Kind

5. B – Sad
6. C – Diligent
7. A – Clumsy
8. B – Harsh
9. D – Optimistic
10. C – Loud : Noisy

📍 Mini Quiz 4: Reading Comprehension, Vocabulary, Idioms & Figures of Speech

1. C – Multitasking decreases productivity
2. B – Neutral-informative
3. A – It causes more mistakes
4. D – Academic
5. B – Predict
6. C – Concise
7. A – Beforehand
8. C – He eats a mountain of rice – exaggeration

9. B – Study hard

10. D – Makes your writing more colorful and expressive

📘 50-Item English Exam Answer Key

No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	B	14	B	27	B	40	C
2	C	15	C	28	B	41	B
3	B	16	C	29	B	42	B
4	C	17	C	30	A	43	B
5	B	18	D	31	B	44	B
6	C	19	B	32	B	45	C
7	B	20	B	33	B	46	C
8	C	21	B	34	C	47	B
9	A	22	B	35	B	48	A
10	B	23	D	36	C	49	B
11	B	24	C	37	C	50	B
12	C	25	B	38	C		
13	B	26	B	39	B		

📘 Mathematics Review Section

🧮 Introduction

Whether you love it or dread it, Math is a non-negotiable part of every college entrance exam, even in a psychology program. That's because math trains your brain to think logically, analyze patterns, and solve problems — essential skills for any future psychologist, especially when tackling statistics and research later on.

This Math section will walk you through the foundational concepts most commonly tested in entrance exams. From dealing with fractions to solving algebraic equations, you'll be guided topic by topic, each explained clearly with examples. Mini quizzes will test your skills after every few topics, and there will be a 50-item full practice exam at the end.

📌 Why this matters for Psych Majors:
You'll eventually need to understand psychological research, statistical results, and data trends. That all starts with mastering the basics now.

📚 Topics Included:

- Integers and Fractions
- Decimals and Percents
- Ratio & Proportion
- Algebraic Expressions
- Solving for x
- Inequalities
- Word Problems (Multi-step)

- Geometry (Perimeter, Area, Volume)
- Angles and Triangles
- Coordinate Plane & Graphs
- Patterns and Sequences
- Basic Statistics (Mean, Median, Mode)

Ready your scratch paper, calculator (if allowed), and confidence — let's do the math! 💪✨

📍 Topic 1: Integers and Fractions

🔢 What are Integers?

Integers are whole numbers — they include positive numbers, negative numbers, and zero.
Examples:

- **Positive**: 1, 2, 3...
- **Negative**: -1, -2, -3...
- **Zero**: 0

You'll often deal with integers when working with temperature, bank balances, or changes in values.

🧮 Basic Operations with Integers:

- **Addition/Subtraction:**
    - (-5) + 3 = -2
    - (-4) - (-6) = 2
- **Multiplication/Division:**
    - (-3) × (-2) = 6
    - (-12) ÷ 3 = -4

🔹 Rules to Remember:

- Positive × Positive = Positive

- Negative × Negative = Positive

- Positive × Negative = Negative

➗ Fractions:

Fractions show parts of a whole.
Example: ¾ means 3 parts out of 4 total.

Types of Fractions:

- Proper: numerator < denominator (e.g., 2/5)

- Improper: numerator > denominator (e.g., 7/4)

- Mixed Number: whole number + fraction (e.g., 1 ½)

Operations with Fractions:

- To add/subtract: use a common denominator

- To multiply: multiply numerator × numerator and denominator × denominator

- To divide: flip the second fraction (reciprocal) and multiply

📌 Tip: Always simplify your answers. A fraction like 6/12 should be reduced to ½.

✅ Math Tip: Always watch your signs when dealing with integers — one negative sign can change the whole answer! Use number lines if you get confused.

📍 Topic 2: Decimals and Percents

🔢 What is a Decimal?

A decimal is a number that includes a dot (.) to separate the whole part from the fractional part.
Example: 3.75 means 3 wholes and 75 hundredths.

Common conversions:

- Fraction to Decimal: Divide the top by the bottom → ½ = 0.5
- Decimal to Fraction: Read the number → 0.25 = 25/100 = ¼

💯 What are Percents?

"Percent" means "per 100." So 25% = 25 out of 100, or ¼.

🧠 Conversions:

- Percent to Decimal: move the decimal two places left → 40% = 0.40
- Decimal to Percent: move it two places right → 0.08 = 8%
- Fraction to Percent: multiply by 100 → ¾ × 100 = 75%

📌 Tip: When stuck on percent word problems, write everything in decimal form — it's easier to work with on a calculator.

✅ Math Tip: To quickly find 10%, just move the decimal one place left. Want 20%? Just double the 10%!

📍 Topic 3: Ratio & Proportion

🔁 What is a Ratio?

A ratio compares two values.

Example: If there are 2 girls for every 3 boys, the ratio is 2:3.

You can write a ratio in 3 ways:

- 2 to 3
- 2:3
- 2/3

⚖️ What is a Proportion?

A proportion is a statement that two ratios are equal.

Example:

2/3 = 4/6 → This is a proportion because 2×6 = 3×4 = 12 (cross-multiply)

How to Solve Proportions:

- Cross-multiply and divide to solve for the unknown.
- If 2/5 = x/10 → 2 × 10 = 5 × x → 20 = 5x → x = 4

📌 Tip: Always simplify ratios first before solving. And double-check by plugging your answer back into the original ratio.

✅ Math Tip: If you're stuck, label the values (e.g. weight, time, distance) and make sure the units match on both sides.

🧮 Mini Quiz 1: Math (Topics 1–3)

Instructions: Choose the best answer for each question. Use scratch paper or a calculator if needed.

---

1. What is the value of: (-6) + 9?

A. -15
B. 3
C. -3
D. 15

---

2. Simplify: 8/12

A. 2/3
B. 4/5
C. 3/4
D. 1/2

---

3. What is ¾ × 2/5?

A. 6/9
B. 6/20
C. 3/10
D. 8/15

---

4. Convert 0.75 to a fraction:

A. ¾
B. 3/5
C. 1/4
D. 7/10

---

5. What is 20% of 150?

A. 20
B. 25
C. 30
D. 35

---

6. Change 3/4 into a percent:

A. 65%
B. 70%
C. 75%
D. 80%

---

7. If the ratio of red to blue marbles is 2:5, what part of the marbles are red?

A. 2/7
B. 2/5
C. 5/7
D. 2/3

---

8. Solve the proportion: 3/4 = x/8

A. 4
B. 6
C. 8
D. 12

---

9. Which of the following represents the ratio 6 to 9 in simplest form?

A. 3:4
B. 2:3
C. 1:3
D. 3:2

10. A recipe uses 2 cups of sugar for every 5 cups of flour. If you use 10 cups of flour, how much sugar do you need?

A. 4 cups
B. 2.5 cups
C. 6 cups
D. 5 cups

📍 Topic 4: Algebraic Expressions

🔣 What is an Algebraic Expression?

An algebraic expression is a mathematical phrase that includes numbers, variables (like x or y), and operations (like +, –, ×, ÷).

Examples:

- $5x + 3$
- $2a – 4b$
- $x^2 + 2x – 1$

It does not include an equal sign (=). If it does, it's an equation, not just an expression.

🧮 Simplifying Algebraic Expressions

You combine like terms:

- $3x + 5x = 8x$

- 4a – 2a = 2a

🔁 Distributive Property

This is useful for expanding parentheses:

- 2(x + 3) = 2x + 6

✍️ Sample Problems:

1. Simplify: 2x + 5x – 3
   → Combine like terms → 7x – 3

2. Expand: 3(a + 4)
   → 3a + 12

3. Simplify: 5y – 2y + 6 – 3
   → 3y + 3

✅ Math Tip: Don't mix apples with oranges—only combine like terms (same variable, same exponent)!

📍 Topic 5: Solving for x (Linear Equations)

🔎 What is a Linear Equation?

A linear equation is an equation where the variable has an exponent of 1 (no squares or cubes). You're asked to find the value of x that makes the equation true.

General form: ax + b = c

🧮 Steps to Solve:

1. Get all variable terms on one side.

2. Get constants on the other side.

3. Isolate the variable (solve for x).

✍️ Sample Problems:

1. Solve: x + 5 = 12
   → x = 12 – 5 → x = 7

2. Solve: 3x = 15
   → Divide both sides by 3 → x = 5

3. Solve: 2x – 4 = 10
   → Add 4 to both sides → 2x = 14
   → Divide by 2 → x = 7

✅ Math Tip: Whatever you do to one side of the equation, you must do to the other. It's all about balance!

📍 Topic 6: Inequalities

🔺 What Are Inequalities?

Inequalities show a range of possible values instead of just one.

Symbols:

- > means greater than
- < means less than
- ≥ means greater than or equal to
- ≤ means less than or equal to

Example:

- x > 3 → x can be any number greater than 3

🧮 Solving Inequalities:

You treat it like an equation, but with 1 big exception:
When multiplying or dividing both sides by a negative number, flip the inequality symbol.

✍️ Sample Problems:

1. Solve: x + 2 < 5
   → Subtract 2 → x < 3

2. Solve: 3x ≥ 12
   → Divide by 3 → x ≥ 4

3. Solve: -2x < 6
   → Divide by -2 → Flip the sign → x > -3

✅ Math Tip: Remember: flip the inequality when you multiply or divide by a negative. That's where most students get tricked!

🧮 Mini Quiz 2: Algebra, Solving for x, Inequalities

Instructions: Choose the correct answer. No calculators unless you're being timed ⏳

---

1. Simplify: 4x + 2x – 7

A. 6x – 7
B. 4x – 5
C. 2x – 7
D. 6x + 7

---

2. Expand: 3(y + 4)

A. 3y + 12
B. 3y + 4
C. y + 12
D. 3y – 12

---

3. Which of the following is a valid algebraic expression?

A. 4x = 7
B. x + 2 = 10
C. 2x – 3
D. x = 5

---

4. Solve for x: x – 9 = 3

A. x = –6
B. x = 6
C. x = 12
D. x = –12

---

5. Solve for x: 5x = 25

A. x = 0
B. x = 125
C. x = 20
D. x = 5

---

6. Solve: 2x + 4 = 10

A. x = 3
B. x = 2
C. x = 1
D. x = 4

---

7. Solve: x + 3 < 10

A. x < 13
B. x < 7
C. x > 7
D. x > 13

---

8. Solve: –3x > 9

A. x > –3
B. x < –3
C. x > 3
D. x < 3

---

9. Which of the following represents “x is greater than or equal to 4”?

A. x > 4
B. x ≤ 4
C. x ≥ 4
D. x < 4

10. Which value is a solution for the inequality $x - 2 \geq 5$?

A. $x = 6$
B. $x = 4$
C. $x = 7$
D. $x = 2$

📍 Topic 7: Word Problems (Multi-Step)

🧠 What Are Word Problems?

Word problems turn real-life situations into math puzzles. They test your ability to translate words into equations — and often require multiple steps.

🔁 How to Solve Word Problems:

1. Understand the problem. Read carefully. What are they asking?
2. Identify keywords (e.g., "more than," "difference," "twice").
3. Assign variables. (Let x = the unknown)
4. Write the equation.
5. Solve and check.

✍️ Sample Problem 1: Allowance Budgeting

CJ receives ₱2,000 every month for allowance. She spends ₱800 on food, ₱450 on transportation, and saves the rest. How much does she save each month?

➡ Step 1: Add all expenses:
₱800 + ₱450 = ₱1,250

➡ Step 2: Subtract from total allowance:
₱2,000 – ₱1,250 = ₱750 saved

✍ Sample Problem 2: School Supplies

A Psychology student bought 3 notebooks at ₱65 each, 2 pens at ₱30 each, and a folder for ₱45. If she paid with a ₱500 bill, how much change did she get?

➡ Total for notebooks: 3 × ₱65 = ₱195
➡ Total for pens: 2 × ₱30 = ₱60
➡ Folder: ₱45
➡ Total spent: 195 + 60 + 45 = ₱300
➡ Change = ₱500 – ₱300 = ₱200

✍ Sample Problem 3: Age Riddle

Meg is 4 years older than Cloe. Five years ago, the sum of their ages was 42. How old is Cloe now?

➡ Let x = Cloe's current age
➡ Then Meg = x + 4
➡ Five years ago:
Cloe → x – 5
Meg → (x + 4) – 5 = x – 1
➡ Equation: (x – 5) + (x – 1) = 42
➡ Simplify: 2x – 6 = 42
➡ 2x = 48 → x = 24

✅ Cloe is 24 now, and Meg is 28. 💑

✍️ Sample Problem 4: Group Expenses

Five friends split the cost of a team shirt equally. If the total was ₱1,250, how much did each person pay?

➡ ₱1,250 ÷ 5 = ₱250 per person

✍️ Sample Problem 5: Daily Quiz Scores

A student took 4 quizzes. His first three scores were 78, 85, and 92. What score does he need on the fourth quiz to have an average of 85?

➡ Step 1: Total needed = 85 × 4 = 340
➡ Step 2: Add first 3 scores = 78 + 85 + 92 = 255
➡ Step 3: 340 – 255 = 85

✅ He needs 85 on the last quiz to get an average of 85. 🎯

📍 Topic 8: Geometry (Perimeter, Area, Volume)

📐 Basic Geometry Concepts

Shape	Perimeter Formula	Area Formula
Rectangle	$P = 2(l + w)$	$A = l \times w$
Square	$P = 4s$	$A = s^2$
Triangle	$P = a + b + c$	$A = \frac{1}{2} \times \text{base} \times \text{height}$
Circle	$C = 2\pi r$	$A = \pi r^2$

🧊 Volume Formulas:

- Cube: $V = s^3$
- Rectangular prism: $V = l \times w \times h$
- Cylinder: $V = \pi r^2 h$

✍️ Example 1:

Find the area of a rectangle with length = 10cm and width = 5cm.
→ $A = 10 \times 5 = 50\ cm^2$

✍️ Example 2:

A cube has side length of 3 meters. What is the volume?
→ $V = 3^3 = 27\ m^3$

✅ Math Tip: Always double-check the units (cm^2 for area, m^3 for volume). Use $\pi = 3.14$ unless told otherwise.

✍️ Example 3: Perimeter of a Triangle

A triangle has sides measuring 8 cm, 7 cm, and 5 cm.
Find the perimeter.
→ P = a + b + c
→ P = 8 + 7 + 5 = 20 cm

✍️ Example 4: Area of a Circle

Find the area of a circle with radius = 4 cm. (Use π = 3.14)
→ $A = \pi r^2$
→ $A = 3.14 \times 4^2 = 3.14 \times 16 = 50.24\ cm^2$

✍️ Example 5: Volume of a Cylinder

A cylindrical can has a radius of 3 cm and a height of 10 cm.
Find its volume.
→ $V = \pi r^2 h$
→ $V = 3.14 \times 9 \times 10 = 282.6\ cm^3$

✅ Bonus Tip: If the question mentions “surface area,” remember it’s about the outside of the shape. “Volume” is what goes inside (like water in a container).

📍 Topic 9: Angles and Triangles

📏 Angles:

- Acute Angle: < 90°
- Right Angle: = 90°
- Obtuse Angle: > 90° and < 180°
- Straight Angle: = 180°

Angle Pair Relationships:

- Complementary: sum = 90°
- Supplementary: sum = 180°
- Vertical Angles: equal (formed by intersecting lines)

🔺 Triangle Facts:

- The sum of interior angles in a triangle is always 180°
- Types of Triangles (by sides):
    - Equilateral (all equal)

- Isosceles (two equal sides)
- Scalene (all sides different)

- Types by angle:
  - Acute, Right, Obtuse

✍️ Example 1:

If one angle in a triangle is 50° and another is 70°, what is the third angle?
→ 180 – (50 + 70) = 60°

✍️ Example 2:

Two angles are complementary. If one is 30°, what is the other?
→ 90 – 30 = 60°

✅ Math Tip: When stuck, sketch the triangle! Don’t guess — plug and play until it clicks.

🧮 Mini Quiz 3: Word Problems, Geometry, Angles

Instructions: Choose the letter of the best answer for each question. Show your work if you're treating this as a practice drill!

---

1. A family ordered 3 large pizzas costing ₱480 each. They gave the delivery rider ₱1,500. How much is their change?

   A. ₱60
   B. ₱100
   C. ₱120
   D. ₱150

---

2. Marco is 4 years older than his sister. The sum of their ages is 28. How old is his sister?

   A. 10
   B. 12
   C. 14
   D. 16

---

3. A psychology student scores 82, 88, and 91 on three quizzes. What must she score on the fourth quiz to average 90?

   A. 95
   B. 98
   C. 99
   D. 100

---

4. What is the area of a square with a side of 9 cm?

   A. 18 cm²
   B. 81 cm²
   C. 36 cm²
   D. 45 cm²

5. A rectangle has a length of 12 cm and width of 6 cm. What is the perimeter?

A. 36 cm
B. 72 cm
C. 60 cm
D. 48 cm

---

6. What is the volume of a cube with side 5 m?

A. 25 m^3
B. 100 m^3
C. 125 m^3
D. 75 m^3

---

7. What is the area of a triangle with base 10 cm and height 8 cm?

A. 40 cm^2
B. 80 cm^2
C. 90 cm^2
D. 100 cm^2

---

8. In a triangle, two angles measure 50° and 65°. What is the third angle?

A. 65°
B. 70°
C. 75°
D. 80°

---

9. Which of the following is a right triangle?

A. One angle is 120°
B. One angle is 45°

C. One angle is 90°
D. One angle is 30°

---

10. Two angles are complementary, and one angle measures 37°. What is the other angle?

A. 43°
B. 53°
C. 63°
D. 73°

📍 Topic 10: Coordinate Plane & Graphs

🗺️ What Is a Coordinate Plane?

The coordinate plane is a two-dimensional grid used to locate points, lines, and shapes using ordered pairs of numbers. It's divided into four quadrants by a horizontal x-axis and a vertical y-axis.

Each point on the plane is written as an (x, y) coordinate:

- x tells you how far left (–) or right (+)
- y tells you how far up (+) or down (–)

The intersection point of both axes is called the origin (0, 0).

🧭 Quadrants Recap:

Quadrant	x-sign	y-sign	Example
I	+	+	(3, 4)
II	–	+	(–2, 5)
III	–	–	(–3, –1)
IV	+	–	(4, –6)

✍️ Examples – Coordinate Plane & Graphs

1. Plot the point (4, –2). Identify which quadrant it falls into.
2. A point is located at (–5, 3). What are the signs of its x and y values, and which quadrant is it in?
3. Point A is at (0, 5). Is it on the x-axis, y-axis, or in a quadrant?
4. Point B is at (–2, –4). How many units is it from the origin horizontally and vertically?

5. Which of the following points lies in Quadrant I?
   A. (–4, 2)
   B. (3, –2)
   C. (2, 4)
   D. (–3, –5)

1. Plot the point (4, –2). Identify which quadrant it falls into.

➡ Answer: Quadrant IV

- Because x is positive and y is negative → it falls in Quadrant IV (lower right)

---

2. A point is located at (–5, 3). What are the signs of its x and y values, and which quadrant is it in?

➡ Answer: x is negative, y is positive → Quadrant II

- Left and up = Quadrant II

---

3. Point A is at (0, 5). Is it on the x-axis, y-axis, or in a quadrant?

➡ Answer: It is on the y-axis

- Because the x = 0, it lies on the y-axis, not in any quadrant

---

4. Point B is at (–2, –4). How many units is it from the origin horizontally and vertically?

➡ Answer:

- Horizontally from origin: 2 units left (because of –2)

- Vertically from origin: 4 units down (because of –4)

---

5. Which of the following points lies in Quadrant I?

A. (–4, 2) → Quadrant II
B. (3, –2) → Quadrant IV
C. (2, 4) → ✅ Quadrant I
D. (–3, –5) → Quadrant III
➡ Correct Answer: C. (2, 4) — both x and y are positive

📍 Topic 11: Patterns and Sequences

🔁 What Are Sequences?

A sequence is an ordered list of numbers that follow a specific rule or pattern.
Recognizing the rule is key to identifying or predicting the next terms.

📚 Types of Sequences:

1. Arithmetic Sequence
   A sequence where you add or subtract a common difference.
   Formula: $a_n = a_1 + (n - 1)d$

2. Geometric Sequence
   A sequence where you multiply or divide by a fixed ratio.
   Formula: $a_n = a_1 \times r^{n-1}$

3. Fibonacci Sequence
   Each term is the sum of the two previous terms.
   Example: 0, 1, 1, 2, 3, 5, 8...

✍️ Examples – Patterns and Sequences

1. What is the next term in the arithmetic sequence: 10, 15, 20, ___?

2. Complete the geometric sequence: 3, 6, 12, ___, ___

3. Which rule describes this sequence: 2, 5, 10, 17, 26...?

4. What is the 6th term in the arithmetic sequence: 4, 7, 10, ___?

5. A pattern grows like this: 2, 4, 8, 16, ___, ___ – What kind of sequence is this?

1. What is the next term in the arithmetic sequence: 10, 15, 20, ___?

➡ Answer: 25

- Explanation: This is an arithmetic sequence with a common difference of +5.
  → 10 + 5 = 15
  → 15 + 5 = 20

→ 20 + 5 = 25

---

2. Complete the geometric sequence: 3, 6, 12, ___, ___

➡ Answer: 24, 48

- Explanation: This is a geometric sequence with a common ratio of ×2.
  → 3 × 2 = 6
  → 6 × 2 = 12
  → 12 × 2 = 24
  → 24 × 2 = 48

---

3. Which rule describes this sequence: 2, 5, 10, 17, 26...?

➡ Answer: Add increasing odd numbers

- Explanation:
  → 2 + 3 = 5
  → 5 + 5 = 10
  → 10 + 7 = 17
  → 17 + 9 = 26
  Pattern is: Add +3, +5, +7, +9...

---

4. What is the 6th term in the arithmetic sequence: 4, 7, 10, ___?

➡ Answer: 19

- Explanation: This sequence has a common difference of +3
  → 1st term: 4
  → 2nd: 7
  → 3rd: 10
  → 4th: 13
  → 5th: 16
  → 6th: 19

---

5. A pattern grows like this: 2, 4, 8, 16, ___, ___ – What kind of sequence is this?

➡ Answer: Geometric Sequence

- Explanation: Each number is multiplied by 2.
  → 2 × 2 = 4
  → 4 × 2 = 8
  → 8 × 2 = 16
  → 16 × 2 = 32,
  → 32 × 2 = 64

So, it's a geometric sequence with a ratio of ×2.

📍 Topic 12: Basic Statistics (Mean, Median, Mode)

📊 Why Statistics Matter in Math & Psychology

Statistics help us organize, analyze, and interpret data — skills essential in psychology. The three most basic measures are:

🔍 Key Terms:

- Mean (Average): Add all numbers and divide by how many.

- Median: The middle value when the data is arranged in order.

- Mode: The number that appears most often.

🧠 Quick Tips:

- For mean, double-check your division.

- For median, always sort the data first.

- For mode, look for repetition. No repeats = no mode.

✍️ Examples – Basic Statistics

1. Find the mean of: 75, 85, 90, 80, 70

2. Find the median: 12, 15, 10, 20, 25

3. Find the mode: 4, 7, 4, 9, 4, 8, 9

4. A student scored: 83, 88, 90. What score must they get on the 4th test to average 90?

5. Which of the following datasets has no mode?
   A. 2, 3, 4, 5
   B. 1, 1, 2, 3
   C. 7, 8, 7, 7
   D. 5, 5, 6, 6

1. Find the mean of: 75, 85, 90, 80, 70

➡ Answer: 80
Explanation:
Add all the numbers:
75 + 85 + 90 + 80 + 70 = 400
Divide by 5: 400 ÷ 5 = 80

---

2. Find the median: 12, 15, 10, 20, 25

➡ Answer: 15
Explanation:
Step 1: Arrange in order: 10, 12, 15, 20, 25
Step 2: Middle number = 15

---

3. Find the mode: 4, 7, 4, 9, 4, 8, 9

➡ Answer: 4
Explanation:
4 appears 3 times, 9 appears 2 times — the rest only once.
So the mode = 4 (most frequent)

---

4. A student scored: 83, 88, 90. What score must they get on the 4th test to average 90?

➡ Answer: 99
Explanation:
Target average = 90 × 4 tests = 360 total points needed
Already scored: 83 + 88 + 90 = 261
Needed: 360 – 261 = 99

---

5. Which of the following datasets has no mode?

A. 2, 3, 4, 5 ✅
Explanation: All numbers appear only once = no mode

- B. 1, 1, 2, 3 → Mode is 1
- C. 7, 8, 7, 7 → Mode is 7
- D. 5, 5, 6, 6 → Bimodal (5 and 6)

📘 MATH FULL MOCK EXAM (50 ITEMS)

Instructions: Choose the correct answer for each item. Write the letter of the best answer.

Integers & Fractions

1. What is the value of: –12 + (–8) = ?

2. Solve: (–15) – (–7) = ?

3. Which is greater: –4 or –7?

4. What is ⅔ of 18?

5. Simplify: 5/10 + 3/5 = ?

Decimals & Percents

6. Convert 0.25 to a percent.

7. What is 20% of 250?

8. Express 75% as a decimal.

9. Increase 120 by 15%.

10. A jacket costs ₱1,500 and is on sale for 20% off. What is the discount?

Ratio & Proportion

11. If the ratio of boys to girls is 3:5, how many girls are there in a group of 40 students?

12. Solve for x: 2/5 = x/15

13. A map scale is 1 cm:5 km. How many km does 6 cm represent?

14. What's the missing number in the proportion: 8:16 = __:32?

15. Divide ₱900 in a ratio of 1:2.

Algebraic Expressions

16. Simplify: 3x + 5x – 2

17. Evaluate: 2a – b if a = 3 and b = 4

18. What is the expression for "five more than twice a number"?

19. Factor: $x^2 + 5x + 6$

20. Simplify: (x + 2)(x + 3)

Solving for x (Linear Equations)

21. Solve: 2x + 5 = 15

22. Solve: x/4 – 3 = 2

23. 5x – 7 = 3x + 5. Find x.

24. 2(x – 1) = 4. What is x?

25. 3x + 2 = 2x + 8. Find the value of x.

Inequalities

26. Solve: x – 4 < 3

27. What is the solution to: 2x ≥ 10?

28. Graph the inequality: x ≤ –2

29. Which inequality represents: “x is greater than or equal to 5”?

30. Solve: –3x > 9

Word Problems

31. A bag of candies costs ₱60. How much will 5 bags cost?

32. A number added to 8 equals 25. What is the number?

33. Carlo is twice as old as Ana. If Ana is 10, how old is Carlo?

34. The sum of three consecutive integers is 51. What are the integers?

35. A book costs ₱450. If you pay with ₱1000, how much change will you get?

Geometry (Area, Perimeter, Volume)

36. Find the perimeter of a rectangle with length = 8 and width = 4.

37. Find the area of a square with side = 6 cm.

38. What is the area of a triangle with base = 10 cm and height = 5 cm?

39. Find the volume of a cube with side = 3 m.

40. A rectangular prism has dimensions 2m × 3m × 4m. What is its volume?

Angles and Triangles

41. A triangle has angles measuring 50° and 60°. What is the third angle?

42. What kind of triangle has sides 5 cm, 5 cm, and 8 cm?

43. What kind of triangle has all angles equal?

44. Which angle is the largest in a triangle with angles 30°, 60°, and 90°?

45. An angle that measures more than 90° is called what?

Coordinate Plane & Graphs

46. What quadrant is the point (–3, 4) in?

47. What is the x-coordinate in (5, –2)?

48. Which point lies on the y-axis?

49. What is the distance between (0, 0) and (0, 6)?

50. Which point is in Quadrant III?
    A. (3, 4)
    B. (–3, –2)
    C. (–4, 2)
    D. (0, –5)

✅ MATH MINI QUIZZES – ANSWER KEYS

Mini Quiz 1: Integers, Fractions, Decimals

1. B. –2
2. C. –5
3. B. 8
4. A. 0.75
5. D. 15

Mini Quiz 2: Ratio, Proportion, Algebra

1. C. 3:4
2. A. 60
3. D. 20
4. B. 3x + 6
5. D. x = 5

Mini Quiz 3: Solving for x, Inequalities, Word Problems

1. C. x = 6
2. B. x = 2
3. D. x < 4
4. C. x = 4
5. A. 3 apples

Mini Quiz 4: Geometry, Coordinate Plane, Statistics

1. D. 36 cm
2. B. 28
3. A. Volume = 8
4. C. Quadrant IV
5. B. Mean = 80

✅ MATH MOCK EXAM – FULL ANSWER KEY WITH COMPUTATIONS & EXPLANATIONS

INTEGERS & FRACTIONS

1. –12 + (–8)
   = –12 – 8 = –20

2. (–15) – (–7)
   = –15 + 7 = –8 (Subtracting a negative = adding)

3. Which is greater: –4 or –7?
   = –4 is closer to zero → greater

4. What is ⅔ of 18?
   = (2/3) × 18 = 12

5. Simplify: 5/10 + 3/5
   = 1/2 + 3/5 → Common denominator = 10
   = (5/10) + (6/10) = 11/10 or 1 1/10

DECIMALS & PERCENTS

6. Convert 0.25 to a percent
   = 0.25 × 100 = 25%

7. What is 20% of 250?
   = 0.20 × 250 = ₱50

8. Express 75% as a decimal
   = 75 ÷ 100 = 0.75

9. Increase 120 by 15%
   = 15% of 120 = 0.15 × 120 = 18
   = 120 + 18 = 138

10. Jacket costs ₱1500, 20% off
    = ₱1500 × 0.20 = ₱300 discount
    = ₱300

RATIO & PROPORTION

11. Ratio 3:5 in 40 students
    3 + 5 = 8 parts
    40 ÷ 8 = 5 per part → Girls = 5 × 5 = 25 girls

12. 2/5 = x/15
    Cross-multiply: 2×15 = 5x → 30 = 5x → x = 6

13. Map 1 cm:5 km → 6 cm
    = 6 × 5 = 30 km

14. 8:16 = __:32
    8 × 4 = 32 → Missing number = 16

15. Divide ₱900 in 1:2 ratio
    3 parts total → 900 ÷ 3 = 300
    → Shares: 300 and 600

ALGEBRAIC EXPRESSIONS

16. Simplify: 3x + 5x – 2
    = (3x + 5x) – 2 = 8x – 2

17. Evaluate 2a – b; a = 3, b = 4
    = 2(3) – 4 = 6 – 4 = 2

18. Five more than twice a number
    = 2x + 5

19. Factor: $x^2 + 5x + 6$
    = (x + 2)(x + 3)

20. Expand: (x + 2)(x + 3)
    = $x^2 + 3x + 2x + 6 = x^2 + 5x + 6$

SOLVING FOR x (Linear Equations)

21. $2x + 5 = 15$
    → $2x = 10$ → $x = 5$

22. $x/4 – 3 = 2$
    → $x/4 = 5$ → $x = 20$

23. $5x – 7 = 3x + 5$
    → $2x = 12$ → $x = 6$

24. $2(x – 1) = 4$
    → $2x – 2 = 4$ → $2x = 6$ → $x = 3$

25. $3x + 2 = 2x + 8$
    → $x = 6$

INEQUALITIES

26. $x – 4 < 3$
    → $x < 7$

27. $2x \geq 10$
    → $x \geq 5$

28. Graph $x \leq –2$
    = Shade all values to the left of –2, including –2

29. Inequality: "x is greater than or equal to 5"
    → $x \geq 5$

30. $–3x > 9$
    → $x < –3$ (reverse the inequality when dividing by negative!)

WORD PROBLEMS

31. Bag ₱60 × 5 bags =
    = ₱300

32. x + 8 = 25 → x = 17

33. Ana = 10 → Carlo = 2×10 = 20

34. Three consecutive numbers = x + (x+1) + (x+2) = 51
    → 3x + 3 = 51 → x = 16
    → Integers: 16, 17, 18

35. ₱1000 – ₱450 = ₱550

GEOMETRY (Area, Perimeter, Volume)

36. Rectangle: 2(8 + 4) = 2(12) = 24

37. Square: A = s^2 = 6^2 = 36 cm^2

38. Triangle: A = ½ × 10 × 5 = 25 cm^2

39. Cube: V = 3^3 = 27 m^3

40. Rectangular prism: V = 2 × 3 × 4 = 24 m^3

ANGLES & TRIANGLES

41. 180 – (50 + 60) = 70°

42. Triangle with 5, 5, 8 = Isosceles

43. Equal angles = Equilateral

44. Largest angle = 90°

45. Angle > 90° = Obtuse

COORDINATE PLANE & GRAPHS

46. (–3, 4) → x = –, y = + → Quadrant II

47. x-coordinate = 5

48. On y-axis → x = 0 (e.g., (0, 3))

49. Distance from (0,0) to (0,6) = 6 units

50. Quadrant III = x = – and y = – → B. (–3, –2)

📘 SCIENCE SECTION

✨ Science Introduction

Science is the study of the natural world — how things work, live, move, react, and interact. For psychology students, science gives us the biological foundation of behavior, the structure of the human brain, and the principles behind experimentation and analysis.

This section is divided into major branches of science with topics that commonly appear in college entrance exams, including UPCAT and PUPCET. You'll also find psychology-relevant scientific concepts to give you a head start in your course.

📖 SCIENCE TOPICS COVERED

1. Life Science

- Cells and their Functions
- Human Organ Systems
- Reproduction and Development

2. Human Anatomy

- Nervous System
- Brain Structure & Functions
- Circulatory System
- Digestive, Respiratory, Excretory Systems

3. Genetics & Heredity

- DNA and Genes
- Punnett Squares
- Traits & Inheritance Patterns

4. Physical Science

- States of Matter
- Atoms and Elements
- Physical vs. Chemical Changes
- Force, Motion, and Newton’s Laws
- Energy Forms & Transfer

5. Earth Science

- Layers of the Earth
- Plate Tectonics
- Natural Disasters (Volcanoes, Earthquakes)
- Rock Cycle

6. Weather & Climate

- Types of Weather
- Climate Zones
- Water Cycle
- Effects of Global Warming

7. Space & Solar System

- Planets & Orbits
- Sun, Moon, and Earth
- Phases of the Moon
- Eclipses

- Gravity and Space Travel

8. Ecology and Environment

- Ecosystems
- Food Chains & Webs
- Biodiversity
- Human Impact on Environment

9. Scientific Method & Experimentation

- Steps of the Scientific Method
- Hypothesis vs. Theory
- Variables (Independent, Dependent, Control)
- Interpreting Data, Graphs & Tables

10. Psychology in Science

- Brain-Behavior Connection
- Role of Hormones & Neurotransmitters

- Experimental Psychology Basics
- Basic Research Ethics

📍 Topic 1: Life Science – Cells and Their Functions

🔬 What is a Cell?

The cell is the basic unit of life. All living organisms are made of cells. Some organisms (like bacteria) are unicellular, while others (like humans) are multicellular — meaning they're made of many cells that perform specialized roles.

🔎 Two Major Types of Cells:

Cell Type	Description	Example
Prokaryotic	No nucleus, simple structure	Bacteria
Eukaryotic	Has a nucleus and organelles (tiny cell organs)	Plants, animals

Humans = Eukaryotic cells

🧬 Cell Structures & Their Functions:

Organelle	Function
Cell Membrane	Controls what enters and exits the cell; semi-permeable
Nucleus	The control center; contains DNA
Cytoplasm	Jelly-like fluid where organelles float
Mitochondria	“Powerhouse of the cell” – produces energy (ATP) through respiration
Ribosomes	Makes proteins (protein synthesis)

Endoplasmic Reticulum (ER)	Transports proteins and fats inside the cell
Golgi Apparatus	Packages and ships materials out of the cell
Lysosomes	Breaks down waste or damaged cell parts ("clean-up crew")
Vacuoles	Stores water, nutrients, and waste
Chloroplasts (plants only)	Photosynthesis – converts sunlight to food
Cell Wall (plants only)	Provides structure and protection

🧠 Cell Theory (Foundation of Biology):

1. All living things are made of cells.
2. Cells are the basic unit of structure and function in living organisms.
3. All cells come from pre-existing cells.

🔋 Why This Matters in Psychology?

- Brain cells (neurons) function using specialized organelles.
- Neurotransmitters are produced and released by specific cellular processes.

- Cell damage (like in Alzheimer's or stroke) affects thinking, memory, and mood.

- Knowing how cells work helps us understand mental and physical health.

📍 Sample Exam-Style Questions with Answers: Cells and Their Functions

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1. What organelle is responsible for energy production in a cell?
   ✅ Answer: Mitochondria
   🔎 Explanation: Mitochondria convert glucose and oxygen into ATP (energy) through cellular respiration, which powers cell activities. That's why they're known as the "powerhouse" of the cell.

---

2. Which cell structure contains genetic material?
   ✅ Answer: Nucleus
   🔎 Explanation: The nucleus houses DNA, which contains the instructions for all cell functions and traits. It acts like the brain of the cell.

---

3. What's the difference between prokaryotic and eukaryotic cells?
   ✅ Answer: Prokaryotic cells do not have a nucleus; eukaryotic cells do.
   🔎 Explanation: Prokaryotes (e.g., bacteria) are simpler and lack membrane-bound organelles. Eukaryotes (e.g., plant and animal cells) are more complex and contain a nucleus and organelles.

---

4. Why are mitochondria often called the powerhouse of the cell?
   ✅ Answer: Because they generate energy (ATP) through cellular respiration.
   🔎 Explanation: They convert glucose into usable energy for the cell. Without mitochondria, cells couldn't function properly.

---

5. Which organelle is responsible for packaging proteins?
   ✅ Answer: Golgi Apparatus

🔎 Explanation: The Golgi apparatus modifies, sorts, and packages proteins and lipids for delivery to their destinations inside or outside the cell — like a cellular post office.

📍 Topic 2: Human Organ Systems

The human body is made up of 11 major organ systems, each responsible for specific functions that keep us alive and healthy. For psychology students, it's especially important to understand systems that interact with the brain and behavior, such as the nervous, circulatory, and endocrine systems.

🧠 Key Human Organ Systems and Their Functions:

Organ System	Major Organs	Function
Nervous System	Brain, spinal cord, nerves	Controls body activities; processes information; responds to stimuli
Circulatory System	Heart, blood vessels, blood	Transports oxygen, nutrients, hormones, and removes waste
Respiratory System	Lungs, trachea, diaphragm	Gas exchange: takes in oxygen, releases carbon dioxide
Digestive System	Stomach, intestines, liver, mouth	Breaks down food into nutrients for the body
Excretory System	Kidneys, bladder, ureters, skin	Removes waste products from the body
Muscular System	Muscles (skeletal, smooth, cardiac)	Enables movement, posture, and heat production

Skeletal System	Bones, joints, cartilage	Supports body, protects organs, produces blood cells
Endocrine System	Glands (pituitary, thyroid, adrenals)	Produces hormones that regulate metabolism, growth, mood, etc.
Integumentary System	Skin, hair, nails	Protects body, regulates temperature, senses environment
Immune System	White blood cells, lymph nodes, spleen	Defends against infections and diseases
Reproductive System	Ovaries, uterus (female); testes (male)	Produces offspring, hormones, and supports sexual development

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🧠 Fun Fact for Psych Students:

The nervous and endocrine systems work closely together to regulate mood, memory, and stress. For example, hormones like cortisol (stress hormone) and neurotransmitters like serotonin affect how we feel and act.

📝 Sample Exam-Style Questions with Answers & Explanations:

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1. Which organ system is responsible for transporting oxygen and nutrients throughout the body?
   ✅ Answer: Circulatory system

🔍 Explanation: It uses the heart and blood vessels to deliver oxygen and nutrients and remove waste products like carbon dioxide.

2. Which two systems are most directly involved in maintaining homeostasis through hormones and nerve impulses?
   ✅ Answer: Nervous and Endocrine systems
   🔍 Explanation: These systems work together to regulate internal conditions — the nervous system acts quickly, while the endocrine system uses hormones for longer-lasting effects.

3. What is the main function of the respiratory system?
   ✅ Answer: Gas exchange — bringing in oxygen and removing carbon dioxide
   🔍 Explanation: The lungs and diaphragm enable breathing and ensure oxygen reaches the bloodstream.

4. Which system helps your body get rid of liquid waste?
   ✅ Answer: Excretory system
   🔍 Explanation: The kidneys filter the blood and produce urine to eliminate waste.

5. The pituitary gland is part of which organ system?
   ✅ Answer: Endocrine system
   🔍 Explanation: It’s called the “master gland” because it controls many hormonal functions throughout the body.

📍 Topic 3: Genetics & Heredity

🧬 What is Genetics?

Genetics is the study of how traits (like eye color, blood type, or height) are passed from parents to offspring through DNA. These instructions are carried by genes found in chromosomes.

Humans have 46 chromosomes (23 pairs) — one set from each parent.

💡 Key Terms to Remember:

Term	Meaning
Gene	A segment of DNA that codes for a trait
Allele	Different forms of a gene (e.g., B or b)
Dominant allele	Expressed even if only one is present (B)
Recessive allele	Only expressed if two copies are present (b)
Genotype	The genetic makeup (e.g., Bb, BB, bb)
Phenotype	The physical expression (e.g., brown eyes)
Homozygous	Two of the same allele (BB or bb)
Heterozygous	Two different alleles (Bb)

📐 Punnett Square Basics:

Used to predict the probability of offspring inheriting certain traits.

Example:

A heterozygous brown-eyed (Bb) parent mates with a blue-eyed (bb) parent. What are the possible genotypes?

		b	b
B	B	Bb	Bb
b	b	bb	bb

→ 50% Bb (brown eyes), 50% bb (blue eyes)

🧠 Sample Exam Questions (With Answers & Explanations)

---

1. What genetic material carries hereditary information?

✅ Answer: DNA

🔍 Explanation: DNA (deoxyribonucleic acid) is the molecule that holds all genetic instructions used in development, functioning, and reproduction.

2. Which of the following genotypes is homozygous recessive?

A. BB

B. Bb

C. bb

D. bB

✅ Answer: C. bb

🔍 Explanation: “bb” contains two recessive alleles, making it homozygous recessive.

---

3. If tall (T) is dominant over short (t), what phenotype will a Tt individual show?

✅ Answer: Tall

🔍 Explanation: The dominant allele (T) will be expressed even with just one copy.

4. What is the probability that two heterozygous parents (Tt x Tt) will produce a short child (tt)?
   ✅ Answer: 25%
   🔍 Explanation:

	T	t
T	TT	Tt
t	Tt	tt

Only 1 out of 4 = 25%

---

5. Which term refers to the physical expression of a gene?
   A. Genotype
   B. Chromosome
   C. Phenotype
   D. DNA
   ✅ Answer: C. Phenotype
   🔍 Explanation: The phenotype is the observable trait, like brown eyes or curly hair.

🔬 Science Mini Quiz: Topics 1–3

(Cells, Organ Systems, Genetics)

1. Which organelle is known as the "powerhouse of the cell"?
   A. Nucleus
   B. Ribosome
   C. Mitochondria
   D. Golgi apparatus

---

2. Which structure in a cell contains the genetic material?
   A. Cytoplasm
   B. Cell membrane
   C. Lysosome
   D. Nucleus

---

3. Which of the following is found in plant cells but not in animal cells?
   A. Mitochondria
   B. Ribosome
   C. Cell wall
   D. Nucleus

---

4. Which organ system is responsible for transporting nutrients, gases, and wastes?
   A. Digestive system
   B. Circulatory system
   C. Respiratory system
   D. Nervous system

---

5. Which system allows us to respond quickly to stimuli?
   A. Muscular system
   B. Endocrine system
   C. Nervous system
   D. Respiratory system

---

6. Which organ system is responsible for producing hormones?
   A. Immune system
   B. Skeletal system
   C. Endocrine system
   D. Excretory system

---

7. What are chromosomes made of?
   A. Water and fat
   B. DNA and protein
   C. RNA and sugar
   D. Enzymes and acids

---

8. What do you call an organism's genetic makeup?
   A. Phenotype
   B. Allele
   C. Genotype
   D. Trait

---

9. In a Punnett square between two Bb parents, what is the chance of a bb child?
   A. 0%
   B. 25%
   C. 50%
   D. 75%

---

10. Which of the following is an example of a phenotype?
   A. Bb
   B. BB
   C. Brown eyes
   D. Recessive allele

📍 Human Anatomy

🧠 Brain Structure & Functions

The brain is the most complex organ in the human body. It’s the control center for everything we think, feel, say, and do. It's part of the Central Nervous System (CNS) and works closely with the spinal cord to send and receive signals throughout the body.

🔍 Major Parts of the Brain and Their Functions

---

1. **Cerebrum**

- Largest part of the brain.
- Divided into left and right hemispheres.
- Each hemisphere controls the opposite side of the body.
- Responsible for:
  ✅ Thinking
  ✅ Problem-solving
  ✅ Decision-making
  ✅ Memory
  ✅ Sensory interpretation
  ✅ Voluntary movements

🧠 Lobes of the Cerebrum:

Lobe	Function
Frontal	Planning, reasoning, emotions, speech, voluntary movement
Parietal	Sensory processing (touch, pain, temperature)
Temporal	Hearing, memory, language
Occipital	Vision

---

2. Cerebellum

- Located under the cerebrum, at the back of the brain.

- Responsible for:
  ✅ Balance
  ✅ Coordination
  ✅ Fine motor skills
  ✅ Posture

🧠 Without the cerebellum, you'd wobble just walking straight!

---

3. Brainstem

- Connects the brain to the spinal cord.

- Controls involuntary functions essential for survival:
  ✅ Breathing
  ✅ Heartbeat
  ✅ Digestion
  ✅ Sleep/wake cycles

🧠 Think of this as your body's autopilot system.

---

4. Hypothalamus

- A small region located below the thalamus.

- Maintains homeostasis (your body's internal balance).

- Regulates:
  ✅ Hunger and thirst
  ✅ Body temperature
  ✅ Emotions
  ✅ Sleep
  ✅ Hormonal signals via the pituitary gland

---

5. Thalamus

- Located above the brainstem.

- Acts like a relay station: it receives sensory signals and sends them to the right part of the cerebrum for processing.

- Involved in:
  ✅ Sensory perception
  ✅ Motor signals
  ✅ Sleep and alertness

---

6. . Limbic System

A group of brain structures involved in emotion, motivation, and memory.

🧠 Key parts:

- Amygdala – processes emotions like fear, anger, pleasure
- Hippocampus – responsible for forming and retrieving long-term memories

---

🧠 Summary Table

Structure	Primary Function
Cerebrum	Thinking, memory, voluntary movement
Cerebellum	Balance and coordination
Brainstem	Involuntary actions (breathing, heartbeat)
Hypothalamus	Body regulation (temp, thirst, hunger)
Thalamus	Sensory relay station
Amygdala	Emotions
Hippocampus	Long-term memory

🫀 Circulatory System

The circulatory system (also called the cardiovascular system) is the body's transport system. It moves blood throughout the body to deliver oxygen, nutrients, and hormones, and to remove wastes like carbon dioxide and toxins.

🔍 Main Components

---

1. Heart

- The muscular pump that drives blood circulation.

- Located slightly left of the center of your chest, protected by the ribcage.

- Has four chambers:
  ✅ Right Atrium
  ✅ Right Ventricle
  ✅ Left Atrium
  ✅ Left Ventricle

💡 How it works:

- Right side: receives deoxygenated blood from the body and pumps it to the lungs.

- Left side: receives oxygenated blood from the lungs and pumps it to the rest of the body.

💡 “Lub-dub” sounds? That’s your heart valves opening and closing.

---

2. Blood Vessels

There are three main types of blood vessels:

Vessel Type	Function	Blood Direction
Arteries	Carry oxygenated blood away from the heart (except the pulmonary artery)	Away from heart
Veins	Carry deoxygenated blood toward the heart (except the pulmonary vein)	Toward heart
Capillaries	Tiny vessels where the exchange of gases and nutrients happens between blood and tissues	Connect arteries and veins

---

3. Blood

The fluid that carries everything.

🩸 **Major Components:**

Component	Function
Red Blood Cells (RBC)	Carry oxygen (via hemoglobin)
White Blood Cells (WBC)	Fight infection
Platelets	Help in blood clotting

Plasma	Fluid that carries hormones, nutrients, waste

🔁 Circulatory Pathway Summary

There are two main loops of circulation:

1. Pulmonary Circulation – blood goes from the heart to the lungs (to get oxygen) and back

2. Systemic Circulation – blood goes from the heart to the body (to deliver oxygen) and back

---

✅ FAQs (Frequently Asked Questions)

Q1: Why is the left side of the heart more muscular?
🩺 Because it pumps blood to the entire body (systemic circulation), which requires more force than just pumping to the lungs.

Q2: Which vessel carries oxygen-rich blood from the lungs to the heart?
💡 Pulmonary vein — it's the only vein that carries oxygenated blood.

Q3: What is the main job of red blood cells?
🩸 To transport oxygen from the lungs to the body using hemoglobin.

Q4: Where does gas exchange happen in the circulatory system?
🫁 In the capillaries, specifically in the lungs and tissues.

Q5: What causes your pulse?
❤️ The contraction of the left ventricle pushes blood through the arteries.

🥪🌬️🚽 Digestive, Respiratory, and Excretory Systems

🥪 Digestive System

The digestive system is your body's nutrient-extraction machine. It breaks down food, absorbs nutrients, and eliminates solid waste.

🔍 Major Organs & Their Functions:

Organ	Function
Mouth	Begins digestion with chewing and saliva
Esophagus	Moves food to the stomach via peristalsis
Stomach	Churns food, uses acids & enzymes to break it down
Small Intestine	The main site of absorption of nutrients
Large Intestine	Absorbs water, forms feces
Rectum & Anus	Stores and eliminates solid waste

Accessory Organs:

- Liver – produces bile to break down fat
- Pancreas – produces enzymes and insulin

- Gallbladder – stores bile

🧠 Remember: Most digestion happens in the stomach, but most absorption happens in the small intestine!

✅ FAQ:

Q: Where does most nutrient absorption occur?
A: In the small intestine, using tiny projections called villi.

🌬️ Respiratory System

The respiratory system enables you to breathe, bringing oxygen into your body and releasing carbon dioxide.

🔍 Major Parts:

Part	Function
Nose/Nasal Cavity	Filters, warms, moistens air
Pharynx & Larynx	Direct air to lungs; larynx has vocal cords
Trachea	Air pipe to the lungs
Bronchi & Bronchioles	Branch into lungs, directing air to alveoli
Alveoli	Site of gas exchange (O_2 in, CO_2 out)
Diaphragm	Main muscle for breathing (contracts → inhale)

🧠 Oxygen enters the bloodstream through alveoli, and carbon dioxide exits the same way, all by diffusion.

✅ FAQ:

Q: What controls breathing rate?
A: The medulla oblongata (in the brainstem) monitors CO_2 levels in the blood.

🚽 Excretory System

The excretory system eliminates metabolic waste and maintains your body's fluid and chemical balance.

🔍 Key Organs:

Organ	Function
Kidneys	Filter blood to produce urine
Ureters	Transport urine from the kidneys to the bladder
Bladder	Stores urine
Urethra	Releases urine from body
Skin	Excretes sweat (water, salt, urea)
Lungs	Exhale carbon dioxide (waste gas)

🧠 Main waste removed by kidneys: urea (from protein breakdown), water, salts, toxins.

✅ FAQ:

Q: What's the functional unit of the kidney?
A: The nephron, it filters blood and forms urine.

Q: What waste does the skin eliminate?

A: Sweat, which contains water, salt, and small amounts of urea.

😉

🧠💓🫁 Mini Quiz – Human Anatomy

1. Which part of the brain controls balance and coordination?
   A. Cerebrum
   B. Cerebellum
   C. Brainstem
   D. Hypothalamus

2. What structure connects the brain to the spinal cord?
   A. Cerebellum
   B. Corpus callosum
   C. Brainstem
   D. Thalamus

3. Which chamber of the heart pumps oxygenated blood to the body?
   A. Left Atrium
   B. Right Atrium
   C. Left Ventricle
   D. Right Ventricle

4. What type of blood vessel carries blood away from the heart?
   A. Veins
   B. Arteries
   C. Capillaries
   D. Venules

5. What organ produces bile to aid in fat digestion?
   A. Pancreas
   B. Stomach
   C. Liver
   D. Gallbladder

6. Where does gas exchange take place in the lungs?
   A. Bronchi

B. Trachea
C. Alveoli
D. Diaphragm

7. Which muscle is responsible for expanding the lungs during inhalation?
A. Intercostal
B. Abdominal
C. Diaphragm
D. Pectoral

8. What is the main function of the nephron in the kidneys?
A. Producing insulin
B. Pumping blood
C. Filtering blood to form urine
D. Absorbing nutrients

9. Which structure transports urine from the kidneys to the bladder?
A. Urethra
B. Ureter
C. Renal artery
D. Loop of Henle

10. Which body system removes waste through urine and sweat?
A. Digestive System
B. Circulatory System
C. Respiratory System
D. Excretory System

🧪 50-Item Science Mock Exam – Life Science, Anatomy & Genetics

LIFE SCIENCE (1–15)

1. Which cell structure controls all activities of the cell?
   A. Mitochondria
   B. Nucleus
   C. Ribosome
   D. Cell membrane

2. The powerhouse of the cell is called:
   A. Lysosome
   B. Golgi apparatus
   C. Mitochondria
   D. Cytoplasm

3. What organelle is responsible for protein synthesis?
   A. Ribosome
   B. Nucleus
   C. Endoplasmic Reticulum
   D. Vacuole

4. What part of the plant cell is not found in animal cells?
   A. Cell wall
   B. Cytoplasm
   C. Nucleus
   D. Ribosome

5. Which organ system helps defend the body from disease?
   A. Digestive
   B. Immune
   C. Respiratory
   D. Circulatory

6. Which organ system delivers oxygen and nutrients to body tissues?
   A. Respiratory
   B. Excretory
   C. Circulatory
   D. Digestive

7. Which of the following is a function of the skeletal system?
   A. Produce hormones
   B. Transport oxygen
   C. Protect organs
   D. Absorb nutrients

8. Which organ system is responsible for removing waste from the body?
   A. Respiratory
   B. Excretory
   C. Digestive
   D. Nervous

9. Which two systems work together to deliver oxygen to the body and remove carbon dioxide?
   A. Digestive and Excretory
   B. Circulatory and Respiratory
   C. Muscular and Skeletal
   D. Nervous and Endocrine

10. Which organ helps in absorbing nutrients into the bloodstream?
   A. Stomach
   B. Small intestine
   C. Large intestine
   D. Esophagus

11. In sexual reproduction, the offspring receive:
   A. Exact copy of one parent's DNA
   B. Half of their DNA from each parent
   C. Only the mother's DNA
   D. DNA from a single parent

12. Which process produces gametes?
   A. Mitosis
   B. Fertilization
   C. Meiosis
   D. Cloning

13. What is the purpose of mitosis?
   A. Reproduction
   B. Growth and repair

C. Gamete formation
D. Genetic variation

14. Which structure houses a developing fetus?
A. Ovary
B. Fallopian tube
C. Uterus
D. Placenta

15. What organ produces sperm in males?
A. Testes
B. Prostate
C. Penis
D. Urethra

HUMAN ANATOMY (16–35)

16. Which part of the nervous system controls voluntary movements?
A. Autonomic
B. Somatic
C. Central
D. Reflex arc

17. Which brain part regulates breathing and heartbeat?
A. Cerebrum
B. Cerebellum
C. Brainstem
D. Hypothalamus

18. What part of the brain is responsible for coordination and balance?
A. Cerebellum
B. Medulla
C. Thalamus
D. Frontal lobe

19. Which chamber of the heart receives deoxygenated blood from the body?
A. Right atrium
B. Left atrium

C. Right ventricle
D. Left ventricle

20. Blood is pumped from the heart to the lungs through the:
    A. Pulmonary artery
    B. Aorta
    C. Pulmonary vein
    D. Superior vena cava

21. Which component of blood is responsible for oxygen transport?
    A. White blood cells
    B. Platelets
    C. Red blood cells
    D. Plasma

22. What structure prevents backflow of blood in the heart?
    A. Arteries
    B. Capillaries
    C. Veins
    D. Valves

23. Where does gas exchange occur in the lungs?
    A. Bronchi
    B. Alveoli
    C. Trachea
    D. Diaphragm

24. The muscle that allows the lungs to expand and contract is the:
    A. Intercostal
    B. Larynx
    C. Diaphragm
    D. Epiglottis

25. Which part of the digestive system absorbs most nutrients?
    A. Stomach
    B. Liver
    C. Large intestine
    D. Small intestine

26. What structure stores bile produced by the liver?
    A. Gallbladder

B. Pancreas
C. Appendix
D. Kidney

27. Which organ filters blood and forms urine?
A. Bladder
B. Ureter
C. Kidney
D. Liver

28. Urine is carried from the kidneys to the bladder by:
A. Urethra
B. Nephrons
C. Ureters
D. Tubules

29. Which organ removes carbon dioxide from the blood?
A. Liver
B. Lungs
C. Kidneys
D. Skin

30. What organ regulates body temperature, water, and excretes sweat?
A. Liver
B. Kidney
C. Skin
D. Pancreas

31. What part of the eye controls how much light enters?
A. Lens
B. Retina
C. Pupil
D. Iris

32. Which type of muscle is found in the heart?
A. Skeletal
B. Smooth
C. Cardiac
D. Voluntary

33. What system is primarily responsible for hormone regulation?
    A. Nervous
    B. Endocrine
    C. Circulatory
    D. Respiratory

34. Which hormone controls the body's metabolism?
    A. Adrenaline
    B. Estrogen
    C. Thyroxine
    D. Insulin

35. What is the basic functional unit of the kidney?
    A. Neuron
    B. Nephron
    C. Axon
    D. Glomerulus

GENETICS & HEREDITY (36–50)

36. Where is DNA located in a cell?
    A. Ribosome
    B. Nucleus
    C. Cytoplasm
    D. Mitochondria

37. What is the shape of a DNA molecule?
    A. Double ring
    B. Spiral ladder
    C. Double helix
    D. Single strand

38. What are the building blocks of DNA?
    A. Proteins
    B. Amino acids
    C. Nucleotides
    D. Genes

39. Which base pairs with Adenine in DNA?
    A. Cytosine
    B. Guanine
    C. Thymine
    D. Uracil

40. What is the function of a gene?
    A. Provide energy
    B. Transport oxygen
    C. Code for proteins
    D. Produce enzymes

41. In a Punnett square, a capital letter usually represents a:
    A. Recessive allele
    B. Dominant allele
    C. Mutated gene
    D. Hybrid trait

42. Two heterozygous parents (Aa x Aa) have a child. What's the chance the child will be homozygous recessive?
    A. 0%
    B. 25%
    C. 50%
    D. 75%

43. If a child inherits one dominant and one recessive allele, the trait expressed is:
    A. Recessive
    B. Co-dominant
    C. Dominant
    D. Mutated

44. What do we call physical traits you can observe?
    A. Genotype
    B. Phenotype
    C. Allele
    D. Chromosome

45. How many chromosomes does a human body cell have?
    A. 23
    B. 46

C. 22
D. 44

46. Which parent determines the sex of the baby?
    A. Mother
    B. Father
    C. Both equally
    D. Random

47. What is a mutation?
    A. A permanent change in DNA
    B. A form of inheritance
    C. A Punnett square result
    D. An extra chromosome only

48. What tool is used to predict genetic crosses?
    A. Venn diagram
    B. Pedigree chart
    C. Punnett square
    D. Gene map

49. What kind of inheritance results in a blend of traits (e.g. red + white = pink)?
    A. Co-dominance
    B. Incomplete dominance
    C. Complete dominance
    D. Mutation

50. Sickle cell anemia is caused by:
    A. A viral infection
    B. A dominant trait
    C. A genetic mutation
    D. A bacteria in red blood cells

✅ 🔬 Science Mini Quiz: Topics 1–3 (Cells, Organ Systems, Genetics)

1. C. Mitochondria
2. D. Nucleus
3. C. Cell wall
4. B. Circulatory system
5. C. Nervous system
6. C. Endocrine system
7. B. DNA and protein
8. C. Genotype
9. B. 25%
10. C. Brown eyes

✅ 🧠💓🫁 Mini Quiz – Human Anatomy

1. B. Cerebellum
2. C. Brainstem
3. C. Left Ventricle

4. B. Arteries

5. C. Liver

6. C. Alveoli

7. C. Diaphragm

8. C. Filtering blood to form urine

9. B. Ureter

10. D. Excretory System

✅ ANSWER KEY – SCIENCE MOCK EXAM

📘 LIFE SCIENCE (1–15)

1. **B.** Nucleus
2. **C.** Mitochondria
3. **A.** Ribosome
4. **A.** Cell wall
5. **B.** Immune
6. **C.** Circulatory
7. **C.** Protect organs
8. **B.** Excretory

9. **B.** Circulatory and Respiratory

10. **B.** Small intestine

11. **B.** Half of their DNA from each parent

12. **C.** Meiosis

13. **B.** Growth and repair

14. **C.** Uterus

15. **A.** Testes

🧠 HUMAN ANATOMY (16–35)

16. **B.** Somatic

17. **C.** Brainstem

18. **A.** Cerebellum

19. **A.** Right atrium

20. **A.** Pulmonary artery

21. **C.** Red blood cells

22. **D.** Valves

23. **B.** Alveoli

24. **C.** Diaphragm

25. **D.** Small intestine

26. **A.** Gallbladder

27. **C.** Kidney

28. **C.** Ureters

29. **B.** Lungs

30. **C.** Skin

31. **D.** Iris

32. **C.** Cardiac

33. **B.** Endocrine

34. **C.** Thyroxine

35. **B.** Nephron

🧬 GENETICS & HEREDITY (36–50)

36. **B.** Nucleus

37. **C.** Double helix

38. **C.** Nucleotides

39. **C.** Thymine

40. **C.** Code for proteins

41. **B.** Dominant allele

42. **B.** 25%

43. **C.** Dominant

44. **B.** Phenotype

45. **B.** 46

46. **B.** Father

47. **A.** A permanent change in DNA

48. **C.** Punnett square

49. **B.** Incomplete dominance

50. **C.** A genetic mutation

🔬 PHYSICAL SCIENCE

📍 Topic 1: States of Matter

Matter is **anything that has mass and takes up space**. It exists in **four main states**:

🔹 **1. Solid**

- **Particles are tightly packed and vibrate in place**
- **Definite shape and volume**
- 📌 *Example: Ice cube, rock, wooden block*

🔹 **2. Liquid**

- **Particles are loosely packed and can slide past each other**
- **Definite volume but takes the shape of the container**
- 📌 *Example: Water, oil, juice*

🔹 **3. Gas**

- **Particles are far apart and move freely**
- **No definite shape or volume**
- 📌 *Example: Oxygen, steam, carbon dioxide*

🔹 **4. Plasma**

- **Ionized gas with charged particles**
- **Found in stars and lightning**
- 📌 *Example: Sun, neon lights*

✅ **Science Tip:** Most matter can change states (solid ↔ liquid ↔ gas) through changes in **temperature** or **pressure** — this is called **phase change** (e.g., melting, freezing, evaporation).

📍 Topic 2: Atoms and Elements

Everything is made of **atoms** — the smallest unit of matter. When atoms of the same kind come together, they form **elements**.

🔬 **Atom Structure:**

- **Protons** – Positive charge (in nucleus)
- **Neutrons** – Neutral charge (in nucleus)
- **Electrons** – Negative charge (orbits around nucleus)

🧪 **Elements:**

- **Pure substances** made of one type of atom
- Represented in the **Periodic Table**
- 📌 *Examples: Hydrogen (H), Oxygen (O), Carbon (C), Iron (Fe)*

✅ **Science Tip:** An **element's atomic number** equals the number of **protons** in its atom. This determines what the element is.

📍 Topic 3: Physical vs. Chemical Changes

🔹 Physical Change

- Alters the **appearance** or **state**, but **not the identity**
- **Reversible**
- 📌 *Examples: Melting ice, cutting paper, boiling water*

🔹 Chemical Change

- Produces a **new substance** with different properties
- **Irreversible** (usually)
- 📌 *Examples: Rusting, burning wood, baking a cake*

🧠 How to tell it's a chemical change:

- Change in **color**
- Formation of **gas** (bubbles)
- Formation of **precipitate** (solid from liquid)
- **Heat/light** is released or absorbed

✅ **Science Tip:** If a **new substance** is created, it's chemical. If it just **looks different**, it's physical.

📍 **Topic 4: Force, Motion, and Newton's Laws**

🚀 **What is Force?**

- **Push or pull** that causes an object to move or change direction.
- Measured in **Newtons (N)**.

🏃 **Types of Motion:**

- **Speed** = distance ÷ time
- **Velocity** = speed in a given direction
- **Acceleration** = change in velocity over time

⚖️ **Newton's Three Laws of Motion:**

1. **Law of Inertia** – Objects at rest stay at rest; objects in motion stay in motion unless acted upon.
    - *Example: A ball on the floor won't roll unless you kick it.*
2. **F = ma (Force = mass × acceleration)** – The greater the mass, the more force needed to move it.
    - *Example: Pushing a car vs. a bike.*
3. **Action = Reaction** – For every action, there's an equal and opposite reaction.

- *Example: Jumping off a boat pushes the boat backward.*

✅ **Science Tip:** More mass means more **inertia**—it resists change more.

📍 Topic 5: Energy Forms & Transfer

Energy is the **ability to do work**. It exists in many forms and can be **transferred or transformed**.

🔋 Types of Energy:

- **Kinetic** – Energy of motion
- **Potential** – Stored energy
- **Thermal** – Heat
- **Chemical** – Stored in bonds (e.g., food, fuel)
- **Electrical** – Flow of electrons
- **Sound** – Vibration through air
- **Light (Radiant)** – Travels in waves, from the sun or a bulb
- **Mechanical** – Total energy of motion and position

🔄 Energy Transfer:

- **Conduction** – heat transfer through solids (e.g., spoon in hot soup)
- **Convection** – heat transfer in liquids/gases (e.g., boiling water)

- **Radiation** – heat transfer through space (e.g., sunlight)

✅ **Science Tip:** Energy **cannot be created or destroyed**, only **transformed** (Law of Conservation of Energy).

🧪 50-Item Physical Science Mock Exam

Choose the letter of the best answer.

📌 States of Matter (1–10)

1. Which state of matter has a definite shape and volume?
   A. Solid
   B. Liquid
   C. Gas
   D. Plasma

2. Which state of matter takes the shape of its container but has a definite volume?
   A. Solid
   B. Liquid
   C. Gas
   D. Plasma

3. Which state of matter spreads to fill its entire container?
   A. Solid
   B. Liquid
   C. Gas
   D. Plasma

4. What happens to particles in a substance when it's heated?
   A. They freeze

B. They slow down
C. They stop moving
D. They move faster

5. Which change of state skips the liquid phase?
   A. Condensation
   B. Melting
   C. Sublimation
   D. Evaporation

6. Which of the following is an example of plasma?
   A. Ice
   B. Sun
   C. Steam
   D. Water vapor

7. Boiling is a change from:
   A. Liquid to gas
   B. Solid to liquid
   C. Gas to liquid
   D. Solid to gas

8. Freezing is a change from:
   A. Liquid to gas
   B. Gas to solid
   C. Liquid to solid
   D. Solid to gas

9. The process where a gas becomes a liquid is called:
   A. Evaporation
   B. Condensation
   C. Sublimation
   D. Melting

10. The temperature at which a substance changes from solid to liquid is called:
    A. Boiling point
    B. Freezing point
    C. Melting point

D. Condensation point

🧬 Atoms and Elements (11–20)

11. The center of an atom is called the:
    A. Proton
    B. Neutron
    C. Electron
    D. Nucleus

12. The particles with a negative charge in an atom are:
    A. Protons
    B. Neutrons
    C. Electrons
    D. Nuclei

13. What determines the atomic number of an element?
    A. Electrons
    B. Protons
    C. Neutrons
    D. Isotopes

14. Which of the following is a noble gas?
    A. Hydrogen
    B. Oxygen
    C. Nitrogen
    D. Neon

15. An element is a substance that:
    A. Is made of multiple atoms
    B. Cannot be broken down into simpler substances
    C. Has different types of atoms
    D. Can be chemically combined

16. Which subatomic particle has no charge?
    A. Proton
    B. Neutron
    C. Electron
    D. Positron

17. Which of the following is NOT a part of the atom?
    A. Electron
    B. Proton
    C. Cell wall
    D. Neutron

18. What is the maximum number of electrons in the first energy level?
    A. 2
    B. 4
    C. 8
    D. 6

19. Which of the following is an element?
    A. Water
    B. Salt
    C. Carbon
    D. Sugar

20. What is the periodic table mainly organized by?
    A. Element names
    B. Atomic weight
    C. Atomic number
    D. Color

🔥 Physical vs. Chemical Changes (21–30)

21. Melting ice is an example of a:
    A. Chemical change
    B. Physical change

C. Nuclear change
D. Combustion

22. Rusting iron is an example of:
    A. Physical change
    B. State change
    C. Chemical change
    D. Melting

23. Burning wood results in:
    A. A physical change
    B. A chemical change
    C. No change
    D. Change in shape only

24. Which is a sign of a chemical reaction?
    A. Change in shape
    B. Color change
    C. Boiling
    D. Melting

25. Cutting a paper is what kind of change?
    A. Chemical
    B. Biological
    C. Physical
    D. Structural

26. Which change forms a new substance?
    A. Boiling
    B. Condensation
    C. Freezing
    D. Combustion

27. Which is a chemical change?
    A. Water freezing
    B. Sugar dissolving
    C. Nail rusting

D. Ice melting

28. Dissolving sugar in water is:
    A. Chemical
    B. Physical
    C. Biological
    D. Endothermic

29. What kind of change occurs when paper burns?
    A. Physical
    B. Temporary
    C. Biological
    D. Chemical

30. Which shows only physical changes?
    A. Melting, boiling, condensing
    B. Rusting, burning, rotting
    C. Exploding, tarnishing, decaying
    D. Corroding, baking, fermenting

⚙️ **Force, Motion, Newton’s Laws (31–40)**

31. What is the unit of force?
    A. Meter
    B. Watt
    C. Newton
    D. Joule

32. Newton's First Law is also called:
    A. Law of Gravity
    B. Law of Energy
    C. Law of Inertia
    D. Law of Force

33. A net force causes an object to:
    A. Stop
    B. Accelerate
    C. Shrink
    D. Float

34. Newton's Third Law states:
    A. For every action, there is an equal and opposite reaction
    B. Force equals mass times acceleration
    C. Objects in motion stay in motion
    D. Energy is conserved

35. What is the formula for force?
    A. F = mv
    B. F = ma
    C. F = m/a
    D. F = m+v

36. What is the SI unit of acceleration?
    A. m/s
    B. m/s^2
    C. N
    D. kg

37. If a ball is rolling and no force acts on it, it will:
    A. Speed up
    B. Stop
    C. Keep rolling
    D. Explode

38. A 2 kg object accelerates at 3 m/s^2. What is the force?
    A. 6 N
    B. 5 N
    C. 4 N
    D. 3 N

39. The tendency of an object to resist change is:
    A. Inertia

B. Gravity
C. Force
D. Friction

40. What slows objects as they move across a surface?
    A. Gravity
    B. Inertia
    C. Friction
    D. Speed

⚡ Energy Forms & Transfer (41–50)

41. What kind of energy is stored in food?
    A. Electrical
    B. Mechanical
    C. Chemical
    D. Solar

42. What energy is associated with motion?
    A. Potential
    B. Sound
    C. Thermal
    D. Kinetic

43. Energy transformation in a flashlight is:
    A. Light to electrical
    B. Mechanical to chemical
    C. Chemical to light
    D. Kinetic to heat

44. Heat transfer through direct contact is:
    A. Conduction
    B. Convection
    C. Radiation

D. Insulation

45. Transfer of heat through fluids is:
    A. Conduction
    B. Convection
    C. Radiation
    D. Fusion

46. Energy that comes from the sun is:
    A. Mechanical
    B. Electrical
    C. Thermal
    D. Radiant

47. A stretched rubber band has what type of energy?
    A. Kinetic
    B. Sound
    C. Potential
    D. Electrical

48. Which device converts chemical energy to electrical energy?
    A. Fan
    B. Battery
    C. Light bulb
    D. Motor

49. What type of energy is used in solar panels?
    A. Thermal
    B. Mechanical
    C. Radiant
    D. Magnetic

50. What happens to energy in a closed system?
    A. It disappears
    B. It is destroyed
    C. It is conserved

D. It doubles

🧠 Answer Key

States of Matter: 1-A, 2-B, 3-C, 4-D, 5-C, 6-B, 7-A, 8-C, 9-B, 10-C
Atoms & Elements: 11-D, 12-C, 13-B, 14-D, 15-B, 16-B, 17-C, 18-A, 19-C, 20-C
Physical vs. Chemical Changes: 21-B, 22-C, 23-B, 24-B, 25-C, 26-D, 27-C, 28-B, 29-D, 30-A
Force & Motion: 31-C, 32-C, 33-B, 34-A, 35-B, 36-B, 37-C, 38-A, 39-A, 40-C
Energy: 41-C, 42-D, 43-C, 44-A, 45-B, 46-D, 47-C, 48-B, 49-C, 50-C

🌍 EARTH SCIENCE

📌 1. Layers of the Earth

The Earth is structured in layers, each with distinct properties. These include:

🔹 **Crust**

- The outermost layer.
- Thinnest layer (5–70 km thick).
- Composed of continental crust (granite) and oceanic crust (basalt).
- Broken into tectonic plates.

🔹 **Mantle**

- Located beneath the crust.
- About 2,900 km thick.
- Composed of semi-solid rock rich in magnesium and iron.
- Divided into:
    - **Upper Mantle** (includes part of the lithosphere and asthenosphere).
    - **Lower Mantle** (more rigid due to pressure).

🔹 **Outer Core**

- Made of liquid iron and nickel.
- Responsible for Earth’s magnetic field.
- Around 2,200 km thick.

🔹 **Inner Core**

- Solid due to immense pressure.
- Composed of iron and nickel.
- About 1,200 km radius.

✅ **Exam Tip**: Remember, the deeper the layer, the hotter and denser it is.

📌 2. Plate Tectonics

The theory explaining the movement of Earth’s lithospheric plates.

🔹 **Main Concepts:**

- Earth's lithosphere is divided into tectonic plates that float on the semi-fluid asthenosphere.
- Plates move due to convection currents in the mantle.

🔹 **Types of Plate Boundaries:**

- **Divergent** – Plates move apart (e.g., Mid-Atlantic Ridge).

- **Convergent** – Plates collide (e.g., Himalayas; subduction zones like the Marianas Trench).
- **Transform** – Plates slide past each other (e.g., San Andreas Fault).

🔹 **Effects of Plate Movement:**

- Earthquakes
- Volcanic activity
- Mountain formation
- Ocean trench formation

✅ **Exam Tip**: Know the boundary types and examples in the Philippines (e.g., Philippine Trench – convergent boundary).

📌 **3. Natural Disasters: Volcanoes & Earthquakes**

🔥 **Volcanoes:**

- Openings in Earth's crust that allow magma, ash, and gases to escape.
- Form mostly at **convergent** and **divergent** plate boundaries.
- Can be classified as:
    - **Active** – Currently erupting or has erupted recently.
    - **Dormant** – "Sleeping"; hasn't erupted in a while but may erupt again.

- **Extinct** – No eruption in recorded history; unlikely to erupt again.

🔹 **Parts of a Volcano**:

- Magma chamber
- Main vent
- Crater
- Lava flow

🌐 **Volcano Types:**

- **Shield** – Broad, gently sloping (e.g., Mauna Loa).
- **Composite/Stratovolcano** – Tall, explosive (e.g., Mayon Volcano).
- **Cinder Cone** – Small, steep (e.g., Parícutin).

🌍 **Earthquakes:**

- Sudden shaking of the ground caused by the release of energy due to plate movement.

🔹 **Key Terms**:

- **Focus** – Point inside the Earth where the earthquake originates.
- **Epicenter** – Point on the surface directly above the focus.

- **Seismic waves** – Energy waves that cause ground movement.

🔹 **Measured By**:

- **Richter Scale** – Magnitude (energy released).
- **Modified Mercalli Scale** – Intensity (damage observed).

✅ **Exam Tip**: PHIVOLCS monitors these hazards in the Philippines.

📌 4. The Rock Cycle

Describes how rocks change from one type to another over time through geological processes.

🔹 **Three Major Rock Types:**

1. **Igneous Rocks**
    - Formed from cooled magma/lava.
    - **Intrusive** (e.g., granite) – cools slowly inside Earth.
    - **Extrusive** (e.g., basalt, pumice) – cools quickly on surface.
2. **Sedimentary Rocks**
    - Formed from compaction/cementation of sediments.
    - Examples: sandstone, limestone, shale.
    - Often contain **fossils**.

3. **Metamorphic Rocks**
    - Formed when existing rock is altered by heat and pressure.
    - Examples: marble (from limestone), slate (from shale).

🔁 **Key Processes:**

- **Weathering and Erosion** – Break down rocks.
- **Compaction and Cementation** – Forms sedimentary rocks.
- **Melting and Cooling** – Forms igneous rocks.
- **Heat and Pressure** – Forms metamorphic rocks.

✅ **Exam Tip**: You can identify the rock type based on formation process and physical appearance (e.g., layers in sedimentary rocks).

🌍 **EARTH SCIENCE MOCK EXAM (25 Items)**

Choose the best answer.

🪨 **Layers of the Earth (1–6)**

1. What is the thinnest layer of the Earth?
   A. Mantle
   B. Core
   C. Crust
   D. Inner Core

2. Which layer of the Earth is responsible for generating the magnetic field?
   A. Mantle
   B. Inner core
   C. Outer core

D. Crust

3. Which part of the Earth is semi-solid and allows tectonic plates to move?
   A. Lithosphere
   B. Asthenosphere
   C. Inner Core
   D. Crust

4. What is the hottest layer of the Earth?
   A. Mantle
   B. Inner core
   C. Crust
   D. Outer core

5. What layer is directly below the crust?
   A. Outer core
   B. Inner core
   C. Mantle
   D. Asthenosphere

6. The Earth's lithosphere includes:
   A. Only the crust
   B. The crust and upper mantle
   C. Only the mantle
   D. Outer core and crust

🌐 **Plate Tectonics (7–13)**

7. The theory that explains the movement of Earth's plates is called:
A. Seismic Theory
B. Plate Drift Theory
C. Plate Tectonics
D. Earthquake Theory

8. Which type of boundary causes plates to move apart?
   A. Convergent

B. Transform
C. Divergent
D. Passive

9. Earthquakes and volcanoes are most likely to occur:
   A. In the middle of continents
   B. Near mountain tops only
   C. At tectonic plate boundaries
   D. In the ocean only

10. What forms when two continental plates collide?
   A. Volcano
   B. Mid-ocean ridge
   C. Earthquake
   D. Mountain

11. A transform boundary occurs when two plates:
   A. Move away from each other
   B. Slide past each other
   C. Move together
   D. Sink under one another

12. Subduction happens when:
   A. Plates move apart
   B. Plates slide past each other
   C. One plate sinks beneath another
   D. Mountains are formed

13. The Philippine Trench is an example of a:
   A. Rift valley
   B. Subduction zone
   C. Fault line
   D. Hot spot

🌋 Natural Disasters (Volcanoes & Earthquakes) (14–19)

14. What is the opening in Earth's crust where lava flows out?
    A. Crater
    B. Vent
    C. Cone
    D. Fault

15. Which type of volcano is broad and gently sloping?
    A. Composite
    B. Cinder cone
    C. Stratovolcano
    D. Shield

16. The strongest earthquakes occur:
    A. At shallow depths
    B. Deep underground
    C. In the crust only
    D. In volcanic zones only

17. The place inside the Earth where an earthquake begins is called the:
    A. Epicenter
    B. Fault
    C. Focus
    D. Seismic point

18. The instrument used to detect earthquakes is a:
    A. Barometer
    B. Thermometer
    C. Seismograph
    D. Richter meter

19. Which scale measures earthquake magnitude?
    A. Celsius Scale
    B. Richter Scale
    C. Barometric Scale

D. Mercalli Scale

🔁 **Rock Cycle (20–25)**

20. Rocks formed from cooled lava or magma are called:
A. Sedimentary
B. Igneous
C. Metamorphic
D. Fossil rocks

21. Rocks formed by heat and pressure are:
A. Sedimentary
B. Fossilized
C. Igneous
D. Metamorphic

22. The breaking down of rocks into smaller pieces is:
A. Erosion
B. Deposition
C. Weathering
D. Lithification

23. What kind of rock often contains fossils?
A. Igneous
B. Metamorphic
C. Sedimentary
D. Lava

24. What is the process that turns sediments into sedimentary rock?
A. Cooling
B. Crystallization
C. Cementation and compaction
D. Melting

25. Which process creates igneous rock?
A. Erosion

B. Cooling of magma
C. Heat and pressure
D. Weathering

✅ Answer Key

Layers of the Earth

1. C
2. C
3. B
4. B
5. C
6. B

Plate Tectonics

7. C
8. C
9. C
10. D
11. B
12. C
13. B

Volcanoes & Earthquakes

14. B
15. D
16. A
17. C

18. C
19. B

Rock Cycle

20. B
21. D
22. C
23. C
24. C
25. B

📍 Weather & Climate

🌀 1. Types of Weather

Weather refers to **the day-to-day atmospheric conditions** such as temperature, humidity, precipitation, cloudiness, visibility, and wind in a particular place at a particular time.

Common Types of Weather:

- ☀️ **Sunny** – Clear skies, dry conditions, more direct sunlight.
- 🌧️ **Rainy** – Water droplets fall from clouds; occurs due to condensation of moisture.
- ⛈️ **Stormy** – Includes heavy rain, thunder, lightning, and possibly strong winds or hail.
- ❄️ **Snowy** – Frozen water vapor falling as flakes; requires cold temperatures.
- 🌫️ **Foggy** – Low visibility due to suspended water droplets near ground level.
- 💨 **Windy** – Strong air movement caused by differences in air pressure.

✅ **Quick Tip:** Weather changes fast and is measured in **short-term** conditions.

🌍 2. Climate Zones

Climate is the **long-term average of weather** in a specific area over decades.

The 5 Major Climate Zones:

1. **Tropical** 🌴
    - Hot and humid all year round
    - Heavy rainfall
    - Countries: Philippines, Indonesia, Brazil
2. **Dry (Arid & Semi-Arid)** 🌵
    - Very little rain
    - Can be hot (deserts) or cold
    - Countries: Egypt, Saudi Arabia
3. **Temperate** 🌳
    - Four seasons (spring, summer, autumn, winter)
    - Moderate rainfall and temperatures
    - Countries: U.S., China, South Korea
4. **Polar** ❄️
    - Very cold all year
    - Snow and ice dominant
    - Countries: Greenland, Antarctica, Arctic regions
5. **Continental** 🌨️
    - Large temperature differences between summer and winter

- Often found in large landmasses (e.g., Russia, Canada)

✅ **Quick Tip:** Climate is what you "expect", weather is what you "get".

💧 3. Water Cycle

Also known as the **Hydrologic Cycle**, this process describes how **water moves through the Earth's atmosphere and surface**.

Key Stages:

1. **Evaporation** – Sun heats water in oceans/lakes, turning it into vapor.
2. **Condensation** – Water vapor cools and turns into clouds.
3. **Precipitation** – Water falls as rain, snow, sleet, or hail.
4. **Collection** – Water gathers in bodies of water or infiltrates the ground.
5. **Transpiration** – Plants release water vapor from their leaves.
6. **Runoff** – Water flows over land back into oceans/lakes.

✅ **Quick Tip:** The water cycle is a **closed loop** – water is never "used up", just constantly recycled.

🔥 4. Effects of Global Warming

Global warming refers to the **long-term rise in Earth's average temperature** caused by human activities like burning fossil fuels and deforestation.

Major Effects:

- 🌊 **Melting ice caps & rising sea levels**
- ☀️ **More frequent heatwaves & droughts**
- 🌪️ **Stronger and more destructive storms**
- 🐧 **Loss of biodiversity & extinction of species**
- 🌾 **Disruption of agriculture & food supply**
- 🧬 **Health impacts (heatstroke, disease spread)**

What Causes It?

- 🚗 Emissions from cars, factories, and power plants
- 🪵 Deforestation (trees absorb CO_2)
- 🛢️ Use of fossil fuels like coal, oil, and gas

✅ **Quick Tip:** Reducing carbon emissions and planting trees help mitigate global warming.

🌦️ 20-Item Mock Exam: Weather & Climate

Choose the best answer for each question.

---

1. Which term describes the daily atmospheric conditions of a place?
A. Climate
B. Season
C. Environment
D. Weather

2. Which of the following is an example of weather?
A. Tropical zone receives heavy rain all year.
B. Antarctica remains frozen year-round.
C. It's raining today in Manila.
D. Summer is hot in the Philippines.

3. What type of weather is most associated with cumulonimbus clouds?
A. Snow
B. Fog
C. Thunderstorms
D. Sunshine

4. Which of the following best describes climate?
A. It rained this morning.
B. January is often cold in Baguio.
C. A typhoon passed by yesterday.
D. The temperature is dropping tonight.

5. Which weather condition results in low visibility due to water droplets near the ground?
A. Rain
B. Fog
C. Snow
D. Wind

6. What kind of climate is found near the equator and is hot and wet all year?
A. Temperate
B. Dry
C. Tropical
D. Polar

7. What is the main feature of a polar climate zone?
A. High rainfall and humidity
B. Mild temperatures
C. Low temperatures and ice
D. Four seasons

8. Which country is located in a temperate climate zone?
A. Philippines
B. Australia
C. Japan
D. Saudi Arabia

9. Which zone has deserts and very little rainfall?
A. Polar
B. Dry
C. Tropical
D. Continental

10. What causes the difference between one climate zone and another?
A. Earthquake location
B. Wind speed
C. Distance from the moon
D. Latitude and elevation

---

11. What is the first step of the water cycle?
A. Condensation
B. Precipitation

C. Evaporation
D. Runoff

12. During which stage of the water cycle do clouds form?
A. Transpiration
B. Precipitation
C. Condensation
D. Collection

13. Rain, snow, sleet, or hail falling from clouds is known as:
A. Evaporation
B. Condensation
C. Transpiration
D. Precipitation

14. Which process releases water vapor through plant leaves?
A. Absorption
B. Condensation
C. Transpiration
D. Photosynthesis

15. Water that flows over the surface of the ground back to rivers or oceans is called:
A. Transpiration
B. Runoff
C. Evaporation
D. Collection

---

16. What is a major contributor to global warming?
A. Wind turbines
B. Solar panels
C. Carbon dioxide from fossil fuels
D. Recycling plastics

17. Which of the following is an effect of global warming?
A. Decreased greenhouse gases
B. Lower sea levels

C. Increased biodiversity
D. More frequent extreme weather

18. Deforestation contributes to global warming by:
A. Cooling the Earth’s surface
B. Releasing excess oxygen
C. Reducing carbon dioxide absorption
D. Causing earthquakes

19. Which of the following actions helps reduce global warming?
A. Burning coal
B. Using fossil fuels
C. Planting trees
D. Driving more cars

20. What is the name for the process where heat gets trapped in the Earth's atmosphere?
A. Ozone depletion
B. Solar radiation
C. The water cycle
D. The greenhouse effect

🌦️ Answer Key: Weather & Climate Mock Exam

1. D. Weather
→ *Weather* refers to short-term atmospheric conditions.

2. C. It's raining today in Manila
→ *Weather* = daily condition. *Climate* = long-term patterns.

3. C. Thunderstorms
→ *Cumulonimbus clouds* are storm clouds, often producing lightning and heavy rain.

4. B. January is often cold in Baguio
→ That reflects a seasonal *climate* trend, not just daily weather.

5. B. Fog
→ *Fog* is made of condensed water droplets near the surface.

---

6. C. Tropical
→ *Tropical climates* are hot and humid, close to the equator.

7. C. Low temperatures and ice
→ *Polar climates* are extremely cold and often icy.

8. C. Japan
→ *Temperate climates* have 4 seasons and mild temperatures.

9. B. Dry
→ *Deserts* fall under dry climate zones.

10. D. Latitude and elevation
→ These two affect sunlight and temperature, shaping climate zones.

---

11. C. Evaporation
→ Heat turns water into vapor, starting the *water cycle*.

12. C. Condensation
→ Water vapor cools and forms *clouds* in this stage.

13. D. Precipitation
→ Any form of moisture that falls from clouds is *precipitation*.

14. C. Transpiration
→ *Plants release water vapor* through their leaves.

15. B. Runoff
→ Water running along the ground toward rivers/lakes is *runoff*.

---

16. C. Carbon dioxide from fossil fuels
→ Burning fossil fuels increases greenhouse gases like CO_2.

17. D. More frequent extreme weather
→ *Heatwaves, typhoons, floods* are all linked to climate change.

18. C. Reducing carbon dioxide absorption
→ Fewer trees = less CO_2 absorbed = faster global warming.

19. C. Planting trees
→ Trees *absorb* CO_2, helping cool the planet.

20. D. The greenhouse effect
→ Traps heat in Earth's atmosphere, causing warming.

🌌 Space & Solar System – Deep Dive

📍 Planets & Orbits

Planets are large celestial bodies that orbit a star — in our case, the **Sun**. There are **8 recognized planets**, divided into two groups:

🔸 **Inner (Terrestrial) Planets:**

- **Mercury, Venus, Earth, Mars**
- Made mostly of rock and metal
- Smaller, denser
- Have solid surfaces
- Few or no moons
- Shorter orbits (closer to the Sun)

🔹 **Outer (Gas Giants & Ice Giants):**

- **Jupiter, Saturn, Uranus, Neptune**
- Composed mostly of gases (hydrogen, helium, methane)
- Larger, with thick atmospheres
- Many moons and ring systems
- Longer orbits (farther from the Sun)

✅ **Fun Fact**: Pluto was reclassified as a **dwarf planet** in 2006 by the IAU.

Orbit: The path a planet takes around the Sun. It's not a perfect circle but an **ellipse** (oval-shaped).

Mnemonic for planets order:
My **V**ery **E**ducated **M**other **J**ust **S**erved **U**s **N**oodles
→ Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

---

📍 **Sun, Moon, and Earth System**

☀️ **Sun:**

- A medium-sized star, mainly composed of hydrogen and helium
- Source of **light**, **heat**, and **energy**
- Supports life on Earth through **photosynthesis** and climate regulation

🌍 **Earth:**

- Third planet from the Sun
- Only known planet to support life
- Has a breathable atmosphere (78% nitrogen, 21% oxygen)
- Tilted axis (23.5°) causes **seasons**

🌙 **Moon:**

- Earth's only natural satellite

- Reflects sunlight (does not produce its own)
- Causes **tides** via gravitational pull
- One full orbit takes **~27.3 days** (a lunar month)

Earth's Motions:

- **Rotation** (spinning on its axis) → causes **day and night**
- **Revolution** (orbiting the Sun) → causes **seasons**

📍 Phases of the Moon

As the Moon orbits Earth, different portions of its sunlit side are visible:

Phase	Description
New Moon	Moon is between Earth and Sun, not visible
Waxing Crescent	Thin sliver grows brighter
First Quarter	Half the Moon is visible (right side lit)
Waxing Gibbous	More than half lit, approaching Full Moon
Full Moon	Entire face is illuminated

Waning Gibbous	Light starts to shrink (left side lit)
Last Quarter	Left half visible
Waning Crescent	Sliver of light before returning to New Moon

📝 **Waxing = Growing | Waning = Shrinking**

📍 Eclipses

An eclipse occurs when a celestial body blocks light from or to another body.

🌞 Solar Eclipse:

- Happens during **New Moon**
- The **Moon** comes between Earth and the Sun
- Sun appears partially or totally blocked
- Types: **Total**, **Partial**, **Annular**

🌚 Lunar Eclipse:

- Happens during **Full Moon**
- Earth comes between the Sun and the Moon
- Earth casts its shadow on the Moon

- Can appear **reddish** ("Blood Moon")

🔭 **Eclipses don’t happen every month** because the Moon’s orbit is slightly tilted compared to Earth’s orbit.

📍 **Gravity and Space Travel**

Gravity is the invisible force that pulls objects toward one another. It's what:

- Keeps planets in orbit around the Sun
- Holds the Moon in orbit around Earth
- Causes objects to fall to the ground on Earth

🚀 **In Space Travel:**

- **Rockets** must reach **escape velocity** to overcome Earth's gravity (about 11.2 km/s)
- Once in space, **low gravity (microgravity)** allows astronauts to float
- **Satellites** stay in orbit due to a balance between forward motion and the pull of gravity

🎯 **Applications**:

- GPS
- Communication

- Earth monitoring (weather, climate, etc.)

✅ **Summary Tips for Exam Prep (with Sample Q&A)**

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1. Memorize the planet order and distinguish between rocky and gas giants

🧠 **Sample Question:**
Q1: What is the correct order of the planets from the Sun?
A: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
(**Mnemonic**: My Very Educated Mother Just Served Us Noodles)

🧠 **Q2:** Which of the following is a gas giant?
A. Earth
B. Mars
C. Jupiter
D. Mercury
Answer: ✅ C. Jupiter

---

2. Understand rotation vs. revolution

🧠 **Q3:** What is Earth's **rotation** responsible for?
A. Seasons
B. Day and Night
C. Lunar Phases
D. Tides
Answer: ✅ B. Day and Night

🧠 **Q4:** How long does **one revolution** of Earth around the Sun take?
Answer: ✅ About **365.25 days** (1 year)

---

3. Draw and label the phases of the moon

If you're asked to draw, remember this order:

New Moon → Waxing Crescent → First Quarter → Waxing Gibbous → Full Moon → Waning Gibbous → Last Quarter → Waning Crescent

🧠 **Q5:** During which phase is the Moon **completely illuminated**?
Answer: ✅ Full Moon

🧠 **Q6:** What is the phase when the Moon is between Earth and the Sun?
Answer: ✅ New Moon

---

4. Be able to explain the difference between lunar and solar eclipses

🧠 **Q7:** What happens during a **solar eclipse**?
Answer: The **Moon blocks the Sun** from reaching Earth. Occurs during **New Moon**.

🧠 **Q8:** When does a **lunar eclipse** occur?
Answer: When **Earth's shadow falls on the Moon**. Happens during **Full Moon**.

---

5. Know why gravity is essential for space motion and orbits

🧠 **Q9:** Why don't planets fly away into space?
Answer: Because of the **Sun's gravitational pull**, which keeps them in orbit.

🧠 **Q10:** What force must rockets overcome to launch into space?
Answer: ✅ Gravity

🌱 Ecology and Environment – Full Elaboration

📍 1. Ecosystems

An **ecosystem** is a community of **living organisms** (plants, animals, microbes) that interact with **non-living elements** (sunlight, air, soil, water) in their environment.

Each organism in an ecosystem plays a specific role or **niche**, contributing to the ecosystem's balance.

🌎 Types of Ecosystems:

- **Forest** – Dense trees, rich in biodiversity, high rainfall.
- **Desert** – Hot, dry, sparse vegetation (e.g., cacti).
- **Marine** – Saltwater systems like oceans, coral reefs.
- **Grassland** – Wide open spaces, grasses dominant, few trees.

- **Freshwater** – Rivers, lakes, ponds, low salt content.

➡️ **Balance is key** – If one part fails (like bees dying), the entire system is affected.

📍 2. Food Chains & Food Webs

🍽️ **Food Chain – A linear path showing the flow of energy:**

- **Sun → Producer (Plant) → Herbivore → Carnivore → Decomposer**

Example: Grass → Grasshopper → Frog → Snake → Hawk

Each level is called a **trophic level**.

🌐 **Food Web – More complex and realistic. Shows how multiple food chains are interconnected.**

➡️ **Important Terms**:

- **Producers** – Usually plants. Make their own food via photosynthesis.
- **Consumers** – Eat other organisms.
    - **Primary** – Eat plants (e.g., rabbit).
    - **Secondary** – Eat primary (e.g., snake).
    - **Tertiary** – Top predators (e.g., eagle).
- **Decomposers** – Break down dead matter (e.g., fungi, bacteria).

📍 3. Biodiversity

Biodiversity is the **variety of living organisms** in a specific area.

Includes:

- Species diversity (different species)
- Genetic diversity (differences within a species)
- Ecosystem diversity (variety of ecosystems)

🌳 Why it matters:

- Helps ecosystems **resist disease**
- Boosts productivity (e.g., different plants provide different resources)
- Contributes to **climate stability**

⚠️ Loss of biodiversity can **weaken an ecosystem**, making it more vulnerable to collapse.

📍 4. Human Impact on Environment

Unfortunately, **human activities** are the biggest threat to ecosystems today.

🚫 Negative Impacts:

- **Deforestation** – Cutting trees disrupts habitats, causes erosion.
- **Pollution** – Air, water, soil contamination harms all life.

- **Climate Change** – Caused by excessive greenhouse gases (e.g., CO_2 from cars, factories).
- **Habitat Destruction** – Urbanization, agriculture, mining displace species.

✅ **Positive Actions:**

- **Conservation** – Protecting endangered species & habitats.
- **Sustainable practices** – Using resources wisely (e.g., replanting trees).
- **Recycling** – Reduces waste and pollution.
- **Renewable energy** – Solar, wind, hydro reduce dependence on fossil fuels.

📌 **Summary Tip Box:**

- 🌿 **Ecosystem = Biotic + Abiotic factors**
- 🌾 **Producers are always first in food chains**
- 🌍 **Biodiversity is key to resilience**
- 🚫 **Human impact must be reduced with conservation**

🧪 Scientific Method & Experimentation – Elaboration & Guide

📍 1. Steps of the Scientific Method

The **Scientific Method** is the **systematic process** scientists use to **investigate observations**, solve problems, and test hypotheses.

🔄 7 Essential Steps:

1. **Ask a Question**
    - Example: *Why do plants grow faster in sunlight?*
2. **Do Background Research**

- Check reliable sources (books, journals, internet) for what's already known.

3. **Form a Hypothesis**
    - A smart guess or prediction.
    - Format: *If ___, then ___ because ___*
    - Example: *If a plant gets more sunlight, then it will grow faster because sunlight aids photosynthesis.*
4. **Test with an Experiment**
    - Design a fair test. Change **only one variable**.
    - Repeat trials for accuracy.
5. **Analyze the Data**
    - Use charts, tables, and graphs to see trends.
    - Average the data if needed.
6. **Draw a Conclusion**
    - Did the results support the hypothesis?
    - Explain what the data shows.
7. **Report Results**
    - Share findings through reports, presentations, or publications.
    - Good science is repeatable — others should be able to verify your findings.

📌 **Tip**: Always be unbiased and record *all* results, even unexpected ones.

📍 2. Hypothesis vs. Theory

🧠 Hypothesis

- A **testable**, educated prediction based on observation.
- Example: *If sugar is added to yeast, then fermentation will increase.*

📚 Theory

- A **well-supported explanation** for a wide range of phenomena.
- Based on **many tested hypotheses** and **repeated observations**.
- Example: *The Theory of Plate Tectonics*, *Theory of Gravity*, *Cell Theory*

📌 **REMEMBER**:

- A hypothesis becomes part of a theory if it's tested and consistently supported.
- A theory is not a "guess" — it's backed by a *lot* of scientific evidence.

📍 3. Variables in Experiments

Understanding **variables** is crucial for a well-designed experiment.

Type of Variable	Description	Example

Independent Variable	The one you **change**	Amount of sunlight given to plants
Dependent Variable	The one you **measure/observe**	Growth of the plant (in cm)
Control Variable	Things you **keep constant**	Type of plant, soil, water, container

➡️ Controlling variables avoids **bias** and keeps your test **fair**.

📍 4. Interpreting Data, Graphs, & Tables

Scientists must **analyze and explain** results using visuals and statistics.

📊 **Types of Graphs:**

- **Bar Graph**: Compare categories (e.g., test scores of students).
- **Line Graph**: Show trends over time (e.g., plant growth per week).
- **Pie Chart**: Show percentages (e.g., types of gases in the atmosphere).

🧮 **Key Elements:**

- **X-axis** = Independent variable (what *you* change)
- **Y-axis** = Dependent variable (what you *measure*)

📌 **What to Look For**:

- **Patterns/Trends** (Does growth increase or decrease?)

- **Outliers** (Any weird result?)
- **Averages** (Add all values and divide by how many)

🔍 **Summary Quick-Study Notes:**

✅ A good experiment changes **one thing** and measures **one thing**.

✅ A **hypothesis** is a guess; a **theory** is a tested explanation.

✅ **Independent variable** is what you change.

✅ **Y-axis = measured** result (dependent variable)

✅ Know how to **interpret graphs** – spot trends, peaks, drops, and plateaus.

🧪 **50-Item Mock Exam – Scientific Method, Psychology in Science, and Ecology**

PART I: Multiple Choice (1–25)

1. Which of the following is the first step in the scientific method?
   A. Analyze data
   B. Form a hypothesis
   C. Ask a question

D. Conduct an experiment

2. What is a hypothesis?
   A. A conclusion drawn from data
   B. A proven scientific fact
   C. A testable prediction
   D. A random guess

3. Which variable is deliberately changed in an experiment?
   A. Dependent
   B. Independent
   C. Control
   D. Constant

4. A control variable:
   A. Is tested
   B. Changes based on results
   C. Is kept constant
   D. Is never used

5. In graphing, the independent variable is placed on:
   A. The y-axis
   B. The legend
   C. The x-axis
   D. The title

6. What is a theory in science?
   A. A guess
   B. A principle with little evidence
   C. A widely accepted explanation backed by evidence
   D. A random belief

7. Which tool best represents data patterns?
   A. Journal
   B. Table
   C. Essay
   D. Storyboard

8. What is a dependent variable?
    A. What stays constant
    B. What is tested
    C. What is measured
    D. What is guessed

9. Which of these is **not** a scientific method step?
    A. Predicting the weather
    B. Reporting results
    C. Testing a hypothesis
    D. Analyzing data

10. What term describes evidence collected from observations?
    A. Opinion
    B. Data
    C. Hypothesis
    D. Bias

11. Which part of the brain controls reasoning and decision-making?
    A. Cerebellum
    B. Brainstem
    C. Frontal lobe
    D. Occipital lobe

12. Which chemical is known as the “feel-good” neurotransmitter?
    A. Dopamine
    B. Cortisol
    C. Melatonin
    D. Adrenaline

13. What part of the brain processes visual information?
    A. Temporal lobe
    B. Parietal lobe
    C. Occipital lobe
    D. Cerebellum

14. The endocrine system uses _____ to send messages.
    A. Nerves

B. Neurons
C. Hormones
D. Enzymes

15. Which hormone regulates sleep?
    A. Insulin
    B. Estrogen
    C. Melatonin
    D. Oxytocin

16. Psychology is defined as the study of:
    A. Chemicals and reactions
    B. The human body
    C. Behavior and mental processes
    D. The immune system

17. What is informed consent?
    A. Agreeing without knowing the risks
    B. Participation without explanation
    C. Clear understanding before participation
    D. Blind agreement to research

18. Which neurotransmitter is linked to mood disorders like depression?
    A. Adrenaline
    B. Acetylcholine
    C. Serotonin
    D. Dopamine

19. Which part of the brain controls basic functions like heartbeat?
    A. Frontal lobe
    B. Medulla
    C. Hippocampus
    D. Amygdala

20. Which of the following is not a principle of research ethics?
    A. Voluntary participation
    B. Harm to subjects
    C. Confidentiality

D. Right to withdraw

21. What is biodiversity?
    A. The number of humans in a population
    B. The rate of extinction
    C. The variety of life in an ecosystem
    D. The amount of carbon in the atmosphere

22. What is a food chain?
    A. A list of producers
    B. One path of energy transfer
    C. All organisms in an ecosystem
    D. A type of energy

23. What is the role of decomposers?
    A. Produce energy
    B. Break down dead matter
    C. Eat producers
    D. Eat consumers

24. What causes habitat loss?
    A. Reforestation
    B. Animal migration
    C. Urban development
    D. Photosynthesis

25. Which human activity contributes most to global warming?
    A. Recycling
    B. Planting trees
    C. Burning fossil fuels
    D. Eating organic food

PART II: True or False (26–40)

26. T/F – A hypothesis must always be correct.

27. T/F – Independent variables are those you measure during an experiment.

28. T/F – Theories in science can change when new evidence is discovered.

29. T/F – Ethics are not important in psychological research.

30. T/F – Dopamine is associated with feelings of reward.

31. T/F – The occipital lobe is involved in memory.

32. T/F – Informed consent protects participants' rights in research.

33. T/F – Ecosystems only include living things.

34. T/F – Producers get energy by eating consumers.

35. T/F – Carbon emissions affect climate change.

36. T/F – Biodiversity supports ecosystem stability.

37. T/F – Experimental psychology focuses only on therapy.

38. T/F – Graphs are used to interpret experimental data.

39. T/F – The brain has no connection to hormone release.

40. T/F – Global warming can lead to rising sea levels.

PART III: Identification (41–45)

41. The variable that is measured in an experiment: _____

42. The chemical messenger that travels through the bloodstream: _____

43. A testable explanation for an observation: _____

44. The variety of living organisms in an environment: _____

45. The part of the brain that regulates emotions and fear: _____

PART IV: Short Explanation (46–50)

46. Explain the difference between a hypothesis and a theory.

47. Why is biodiversity important to an ecosystem?

48. Describe the ethical principles a psychologist must follow when conducting experiments.

49. How does burning fossil fuels contribute to global warming?

50. Describe how the independent, dependent, and control variables work together in an experiment.

✅ Answer Key

PART I: Multiple Choice (1–25)

1. C. Ask a question
2. C. A testable prediction
3. B. Independent
4. C. Is kept constant
5. C. The x-axis
6. C. A widely accepted explanation backed by evidence
7. B. Table
8. C. What is measured
9. A. Predicting the weather
10. B. Data
11. C. Frontal lobe
12. A. Dopamine
13. C. Occipital lobe
14. C. Hormones
15. C. Melatonin
16. C. Behavior and mental processes
17. C. Clear understanding before participation

18. C. Serotonin

19. B. Medulla

20. B. Harm to subjects

21. C. The variety of life in an ecosystem

22. B. One path of energy transfer

23. B. Break down dead matter

24. C. Urban development

25. C. Burning fossil fuels

PART II: True or False (26–40)

26. **False**

27. **False**

28. **True**

29. **False**

30. **True**

31. **False** (Occipital = vision)

32. **True**

33. **False** (Includes non-living things too)

34. **False** (Producers make their own energy)

35. **True**

36. **True**

37. **False** (It includes experimentation, not just therapy)

38. **True**

39. **False** (Hormones are regulated partly by the brain)

40. **True**

PART III: Identification (41–45)

41. **Dependent variable**

42. **Hormone**

43. **Hypothesis**

44. **Biodiversity**

45. **Amygdala**

PART IV: Short Explanation (46–50)

46. **A hypothesis** is a testable and specific prediction that can be supported or refuted by experimentation. **A theory** is a well-tested, evidence-supported explanation for a broad set of phenomena.

47. **Biodiversity** increases ecosystem resilience, supports food chains, enables species survival, and ensures ecosystem stability under environmental stress.

48. Psychologists must ensure **informed consent**, minimize harm, protect confidentiality, allow **voluntary participation**, and give subjects the right to withdraw at any time.

49. Burning fossil fuels releases **greenhouse gases** like carbon dioxide, which trap heat in the atmosphere, contributing to **global warming** and climate change.

50. The **independent variable** is what the experimenter changes. The **dependent variable** is what's measured as the result. **Control variables** are kept constant to ensure a fair test.

🧠 Psychology in Science

📍 1. Brain-Behavior Connection

What it means:
This explores how different parts of the brain influence thoughts, emotions, and actions. The brain is the command center of the body — everything we feel, think, or do links back to how our brain processes information.

Key Brain Structures:

- **Frontal Lobe** – decision-making, reasoning, planning, personality.
- **Parietal Lobe** – touch, spatial awareness, body position.
- **Temporal Lobe** – hearing, language, memory.
- **Occipital Lobe** – vision.
- **Amygdala** – fear, emotions.
- **Hippocampus** – memory formation.
- **Cerebellum** – coordination, balance.

- **Brainstem** – heart rate, breathing, basic survival.

Example: Damage to the **frontal lobe** can result in poor judgment or personality changes.

✨ **Quick Tip:** Remember the brain is like a company: each department (lobe) has a unique role, but they all work together to keep the body functioning.

📍 2. Role of Hormones & Neurotransmitters

Neurotransmitters are **chemical messengers** in the brain that transmit signals between nerve cells (neurons).
Hormones are chemical messengers released by glands (like the thyroid or adrenal gland) that affect organs and tissues throughout the body.

🧠 Key Neurotransmitters:

- **Dopamine** – reward, pleasure, motivation.
- **Serotonin** – mood, sleep, appetite.
- **Acetylcholine** – memory, learning.
- **Norepinephrine** – alertness, stress response.
- **GABA** – calming effect, reduces anxiety.

🔁 Key Hormones:

- **Adrenaline** – “fight or flight” response.
- **Cortisol** – stress hormone.

- **Oxytocin** – bonding, trust, love.
- **Melatonin** – sleep regulation.
- **Thyroxine** – metabolism.

✨ **Quick Tip:** Neurotransmitters work **in the brain**, hormones travel **through the blood**. Both affect how we think, feel, and behave.

📍 3. Experimental Psychology Basics

Definition:
The branch of psychology that uses **controlled experiments** to study behavior and mental processes.

🔍 **Core Elements:**

- **Independent Variable (IV):** What the researcher manipulates.
- **Dependent Variable (DV):** What's measured.
- **Control Variables:** Kept constant to ensure fair testing.
- **Experimental Group:** Receives the treatment.
- **Control Group:** Does not receive the treatment (used for comparison).

Example:
If testing whether sleep affects test scores:

- IV: Amount of sleep.

- DV: Test scores.
- Control: Same test, same environment.

✨ **Quick Tip:** Psychology uses scientific methods, not just observations. It's about **proving cause and effect.**

📍 4. Basic Research Ethics

Psychological research involves human participants, so ethics are a **big deal**.

📋 Core Ethical Principles:

1. **Informed Consent** – Participants must be fully aware of what the study involves and must voluntarily agree to participate.
2. **Confidentiality** – Personal data must be protected and remain private.
3. **Right to Withdraw** – Participants can leave the study at any point without penalty.
4. **No Harm** – Physical or emotional harm must be avoided.
5. **Debriefing** – Participants are told the full purpose and findings of the study afterward, especially if deception was used.

Example:
Milgram's obedience experiment raised ethical concerns because participants weren't fully aware of the nature of the shock experiment.

✨ **Quick Tip:** If a psychological study would cause distress, violates privacy, or deceives people without proper explanation — it's unethical.

📝 Mini Quiz – Psychology in Science

Part I: Multiple Choice

1. Which part of the brain is responsible for decision-making and personality?
A. Cerebellum
B. Frontal Lobe
C. Occipital Lobe
D. Brainstem

2. Which neurotransmitter is commonly linked to pleasure and motivation?
A. Serotonin
B. GABA
C. Dopamine
D. Cortisol

3. What is the role of oxytocin in the body?
A. Increases stress
B. Regulates metabolism
C. Promotes bonding and trust
D. Enhances memory

4. In an experiment, what is the dependent variable?
A. The factor you keep constant
B. The outcome you measure
C. The variable you change
D. The group that receives no treatment

5. What does "informed consent" mean in research?
A. Hiding details from participants
B. Getting permission to publish names
C. Ensuring participants know what they're agreeing to
D. Making participants finish the study once started

Part II: True or False

6. T/F – Serotonin is a neurotransmitter that influences mood and appetite.
7. T/F – The brainstem controls memory and emotion.
8. T/F – A hypothesis and a theory mean the same thing.
9. T/F – Participants in psychological studies have the right to withdraw at any time.
10. T/F – The cerebellum controls balance and coordination.

Here's the **Answer Key** for the *Mini Quiz – Psychology in Science* 🧠✅

📝 Part I: Multiple Choice

1. B. **Frontal Lobe**
(Responsible for decision-making, personality, and higher-level thinking.)

2. C. **Dopamine**
(Linked to pleasure, motivation, and reward.)

3. C. **Promotes bonding and trust**
(Oxytocin is often called the "love hormone".)

4. B. **The outcome you measure**
(The dependent variable is what you observe as a result.)

5. C. **Ensuring participants know what they're agreeing to**
(Informed consent means giving full information before participation.)

✅ **Part II: True or False**

6. ✅ **True**
(Serotonin helps regulate mood, sleep, and appetite.)

7. ❌ **False**
(The **limbic system** – particularly the amygdala and hippocampus – is involved in memory and emotion. The **brainstem** controls vital functions like breathing and heartbeat.)

8. ❌ **False**
(A **hypothesis** is a testable prediction; a **theory** is a well-supported explanation based on evidence.)

9. ✅ **True**
(Ethical research requires allowing participants to leave a study at any time.)

10. ✅ **True**
(The **cerebellum** helps with movement coordination and balance.)

📚 **FILIPINO**

🎯 ***Layunin:***

Masusukat dito ang iyong kasanayan sa wikang Filipino – mula sa gramatika, talasalitaan, hanggang sa pagsusuri ng teksto. Ito ay mahalaga para sa mga kursong nangangailangan ng mahusay na komunikasyon at interpretasyon gaya ng **BS Psychology**.

🧠 ***Mga Karaniwang Saklaw:***

1. **Bahagi ng Pananalita** – Pangngalan, Pang-uri, Pandiwa, etc.
2. **Wastong Gamit ng Salita** – Gaya ng ng vs. nang, daw vs. raw.
3. **Uri ng Pangungusap** – Pasalaysay, Patanong, Pautos, Padamdam.
4. **Pagkilala sa Antas ng Wika** – Balbal, Kolokyal, Pampanitikan, etc.
5. **Pag-unawa sa Teksto** – Pagkilala sa pangunahing ideya, detalye, layunin ng may-akda.

🌍 **ARALING PANLIPUNAN (Social Studies)**

🎯 ***Layunin:***

Nasusukat ang kaalaman mo sa kasaysayan, pamahalaan, ekonomiya, at mga isyung panlipunan. Napakahalaga nito, lalo na para sa mga estudyanteng kukuha ng kursong nauugnay sa human behavior at community understanding tulad ng Psychology.

🧠 ***Mga Karaniwang Saklaw:***

1. **Kasaysayan ng Pilipinas** – Mga bayani, mahahalagang petsa, kolonisasyon, EDSA.
2. **Sangay ng Pamahalaan** – Lehislatura, Ehekutibo, Hudikatura.
3. **Mga Karapatan ng Mamamayan** – Saligang Batas, Bill of Rights.
4. **Ekonomiks (Basic Concepts)** – Demand, Supply, GDP.
5. **Heograpiya** – Rehiyon ng Pilipinas, anyong lupa at tubig.

6. **Current Events** – Mga isyung panlipunan gaya ng climate change, inflation, atbp.

💡 **Tip:**
Both Filipino and Araling Panlipunan often include comprehension-based questions — so your skill in *analyzing*, not just memorizing, will really help you ace these.

🇵🇭 **1. Bahagi ng Pananalita (Parts of Speech)**

Ito ang mga salitang bumubuo sa pangungusap. May **walong pangunahing bahagi**:

1. **Pangngalan (Noun)** – tumutukoy sa pangalan ng tao, hayop, bagay, lugar o pangyayari.
   *Hal: Si **CJ** ay nag-aaral sa **ICCT**.*

2. **Panghalip (Pronoun)** – pamalit sa pangngalan.
   Hal: Siya ay masipag.

3. **Pandiwa (Verb)** – kilos o galaw.
   Hal: Naglakad si Meg papuntang simbahan.

4. **Pang-uri (Adjective)** – naglalarawan ng pangngalan o panghalip.
   Hal: Maganda ang bagong uniforme ni Cloe.

5. **Pang-abay (Adverb)** – naglalarawan ng pandiwa, pang-uri, o kapwa pang-abay.
   *Hal: Tumakbo **nang mabilis** si CJ.*

6. **Pangatnig (Conjunction)** – nag-uugnay ng mga salita o kaisipan.
   *Hal: Gusto ko ng kape **at** tinapay.*

7. **Pang-angkop (Linker)** – nag-uugnay ng panuring sa salitang tinuturingan.
   *Hal: Magandang **araw**.*

8. **Pang-ukol (Preposition)** – nag-uugnay ng pangngalan sa ibang salita.
   *Hal: Para **sa**'yo ang rosas na ito.*

📝 2. Wastong Gamit ng Salita

Ito ay mga pares ng salita na madalas gamitin pero kadalasang **nagkakapalit** ang gamit.

1. **Ng vs. Nang**

- **Ng** – ginagamit bilang pantukoy sa layon ng pandiwa.
  Hal: Kumain **ng** mangga si CJ.

- **Nang** – ginagamit sa pang-abay o upang ipakita ang sanhi o paraan.
  Hal: Tumakbo siya **nang** mabilis.*

2. **Daw vs. Raw**

   - **Daw** – kapag ang sinusundang salita ay nagtatapos sa katinig (hindi patinig).
     Hal: Mabait **daw** si kuya Eli.*

   - **Raw** – kapag ang sinusundang salita ay nagtatapos sa patinig.
     Hal: Masaya **raw** sila sa outing.*

✅ **TIP:** Balikan lagi ang tunog, hindi lang ang letra!

🗣️ **3. Uri ng Pangungusap**

Ito ay **batay sa gamit**:

1. **Pasalaysay (Declarative)** – nagsasaad ng impormasyon o kwento.
   Hal: Nag-aral siya buong gabi.*

2. **Patanong (Interrogative)** – nagtatanong.
   Hal: Kumain ka na ba?*

3. **Pautos (Imperative)** – nag-uutos o nakikiusap.
   Hal: Pakikuha ang libro.*

4. **Padamdam (Exclamatory)** – nagpapahayag ng matinding damdamin.
   Hal: Aray! Ang sakit!*

✅ **TIP:** Pansinin ang bantas – tuldok, tandang pananong, tandang padamdam!

🗨️ **4. Antas ng Wika**

Nagpapakita kung **kanino at kailan** ginagamit ang wika.

1. **Balbal** – pinakababang antas, slang.
   Hal: Jeproks, chibog, ermat, erpat*

2. **Kolokyal** – pang-araw-araw na gamit, pinaikli.
   Hal: Nasan ka? (Imbes na "Nasaan ka?")*

3. **Lalawiganin** – ginagamit sa probinsya; may kakaibang tono o salita.
   Hal: "Bayô" = damit sa Ilokano*

4. **Pambansa** – karaniwang ginagamit sa paaralan at opisina.
   Hal: Mag-aaral, paaralan, pamahalaan*

5. **Pampanitikan** – pinakamasining; karaniwang ginagamit sa panitikan.
   Hal: "Pusong-bato," "Diwa ng pag-ibig"

✅ **TIP:** Sa exam, alam mo na agad: kung slang = balbal, kung poetic = pampanitikan!

📖 **5. Pag-unawa sa Teksto (Reading Comprehension)**

Kasanayan sa pagbasa at **pagsusuri** ng mga akda.

✅ Dapat alam mo kung paano:

- **Kilalanin ang pangunahing ideya**
  Tanong: Ano ang pinaka-punto ng talata?

- **Maghanap ng detalye o ebidensya**
  Tanong: Anong sumusuportang ideya ang binanggit?

- **Tukuyin ang layunin ng may-akda**
  Tanong: Nais ba niyang magpabatid, manghikayat, o maglibang?

- **Magbigay ng konklusyon o hinuha**
  Tanong: Ano ang maaaring mangyari sa susunod?

✅ **TIP:** Basahin muna lahat ng tanong bago basahin ang buong teksto. Makatutulong yan para alam mo ang hahanapin!

🇵🇭 **Filipino Mini Quiz (15 items)**

Part I – Multiple Choice (1–7)

1. Alin sa mga sumusunod ang isang **pangngalan**?
   A. Tumakbo
   B. Masaya
   C. Guro
   D. Maganda

2. Ano ang tamang gamit sa pangungusap na ito?
   Kumain siya ___ tahimik.
   A. ng
   B. nang
   C. raw
   D. ng ng

3. Alin sa mga sumusunod ang **pang-abay**?
   A. Malaki
   B. Masarap
   C. Kaagad
   D. Mabango

4. *“Ang ganda raw ng simbahan,”* ang sabi ni Ate. Bakit **"raw"** ang ginamit?
   A. Dahil ito ay galing sa lalaki

B. Dahil nagtatapos sa patinig ang salita bago ito
C. Dahil mas maganda pakinggan
D. Dahil pasalaysay ang pangungusap

5. Anong **uri ng pangungusap** ito: *“Huwag mong kalimutang magsimba!”*
   A. Pasalaysay
   B. Patanong
   C. Pautos
   D. Padamdam

6. Alin sa mga sumusunod ang halimbawa ng **pampanitikang wika**?
   A. Kumain
   B. Malungkot
   C. Pusong-bato
   D. Tubig

7. *Ano ang layunin ng may-akda kung ang teksto ay nagbibigay babala tungkol sa bagyo?*
   A. Magpabatid
   B. Manghikayat
   C. Maglibang
   D. Magturo ng kasaysayan

Part II – Identification (8–11)

8. Bahagi ng pananalita na **nagpapakita ng kilos**: _____

9. Ginagamit para **pag-ugnayin ang panuring at salitang tinuturingan**: _____

10. Anong antas ng wika ang “chika, tsibog, petmalu”? _____

11. Anong bahagi ng pananalita ang "siya, akin, ito"? _____

Part III – True or False (12–15)

12. T/F – Ang “nang” ay ginagamit kapag sinusundan ng pangngalan.
13. T/F – Ang “ng” ay ginagamit upang ilarawan kung paano ginawa ang kilos.
14. T/F – Ang padamdam ay nagpapahayag ng matinding damdamin.
15. T/F – Ang balbal ay mas mataas ang antas kaysa sa kolokyal.

🇵🇭 1. Kasaysayan ng Pilipinas

Mga Bayani:

- *Jose Rizal* – pambansang bayani, sumulat ng *Noli Me Tangere* at *El Filibusterismo* para ilantad ang katiwalian ng mga Kastila.
- *Andres Bonifacio* – nagtatag ng Katipunan, nanindigan sa armadong rebolusyon.
- *Emilio Aguinaldo* – unang pangulo ng Pilipinas, itinatag ang unang Republika ng Pilipinas.
- *Apolinario Mabini* – kilala bilang "Dakilang Lumpo," utak ng rebolusyon.
- *Gabriela Silang* – babaeng lider-rebolusyonaryo sa Ilocos.

Mahahalagang Petsa:

- *June 12, 1898* – Araw ng Kalayaan
- *August 21, 1983* – Pagpaslang kay Ninoy Aquino
- *February 25, 1986* – People Power Revolution / EDSA I

- *July 4, 1946* – Pagkamit ng ganap na kalayaan mula sa Amerika
- *September 21, 1972* – Idineklara ang Martial Law

Kolonisasyon:

- *Espanyol (1521–1898)* – 300+ taon ng kolonyalismo; Kristiyanismo, encomienda system, galleon trade.
- *Amerikano (1898–1946)* – edukasyon, demokrasya, sistema ng pamahalaan.
- *Hapones (1942–1945)* – pananakop noong WWII; Japanese occupation; KALIBAPI, makabayang gerilya.

EDSA Revolution (1986):

- Mapayapang rebolusyon; ibinagsak ang diktadurya ni Marcos, ibinalik ang demokrasya.
- Simbahan, militar, at mamamayan ay nagtulungan. Nagluklok kay *Cory Aquino* bilang pangulo.

🏛️ 2. Sangay ng Pamahalaan

Ehekutibo:

- Nagpapatupad ng batas. Pinamumunuan ng *Pangulo*. Kasama ang mga *Kalihim ng Gabinete*.
- May kapangyarihang magtalaga ng opisyal, mag-veto ng batas, at mamuno sa sandatahang lakas.

Lehislatura:

- Gumagawa ng batas. May dalawang sangay: *Senado (24)* at *Kapulungan ng mga Kinatawan*
- Tungkulin nilang aprubahan ang pambansang badyet, imbestigahan ang mga isyu sa gobyerno, at gumawa ng panukalang batas.

Hudikatura:

- Nagbibigay ng interpretasyon sa batas. Pinamumunuan ng *Korte Suprema*.
- Tungkulin nitong tiyakin na legal ang mga hakbang ng gobyerno. May kapangyarihan ng *judicial review*.

👥 3. Mga Karapatan ng Mamamayan (Saligang Batas, Bill of Rights)

Saligang Batas (1987 Constitution):

- Pangunahing batas ng bansa. Pinatibay matapos ang EDSA Revolution.
- Nagtatakda ng istruktura ng pamahalaan, kapangyarihan ng bawat sangay, at karapatan ng mamamayan.

Bill of Rights (Artikulo III):

- Karapatang pantao na hindi dapat labagin:
    - *Karapatang mabuhay, malaya, at magkaroon ng ari-arian*
    - *Karapatang magpahayag ng saloobin*

- *Karapatang sa due process*
- *Karapatang magpulong at magpetisyon*
- *Karapatang magkaroon ng malayang relihiyon*
- *Proteksyon laban sa iligal na pag-aresto at torture*

💸 4. Ekonomiks (Basic Concepts)

Demand:

- Ang kagustuhan ng tao sa isang produkto na may kakayahang bilhin ito.
- *Law of Demand:* Habang tumataas ang presyo, bumababa ang demand.

Supply:

- Dami ng produkto na handa at kayang ipagbili ng producer sa isang takdang presyo.
- *Law of Supply:* Habang tumataas ang presyo, tumataas ang supply.

GDP (Gross Domestic Product):

- Kabuuang halaga ng produkto at serbisyo na nagawa sa bansa sa isang taon.
- Panukat ng **kalagayang pang-ekonomiya** ng bansa.

Ibang Termino:

- *Inflation* – pagtaas ng presyo ng bilihin
- *Unemployment* – kakulangan sa trabaho
- *Opportunity cost* – ang halaga ng bagay na isinuko para sa ibang pagpipilian

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🌍 5. Heograpiya ng Pilipinas

Rehiyon ng Pilipinas:

- 17 rehiyon mula Luzon, Visayas, Mindanao
- *Halimbawa:* NCR (National Capital Region), Region IV-A (CALABARZON), BARMM (Bangsamoro Autonomous Region)

Anyong Lupa:

- *Bundok* (Mt. Apo, Mt. Pulag)
- *Bulubundukin* (Sierra Madre)
- *Burol, Lambak, Kapatagan, Talampas*

Anyong Tubig:

- *Ilog* (Pasig, Cagayan)
- *Lawa* (Lanao, Taal)
- *Karagatan* (Karagatang Pasipiko)

- *Look at Golpo* (Manila Bay, Lingayen Gulf)

Lokasyon:

- Matatagpuan sa *Timog-Silangang Asya*.
- Mahalaga sa kalakalan at estratehikong posisyon sa dagat.

🗞️ 6. Current Events (Panlipunang Isyu)

Climate Change:

- Pag-init ng mundo (global warming) dulot ng greenhouse gases.
- Epekto: matinding bagyo, tagtuyot, at pagtaas ng tubig-dagat.
- Solusyon: renewable energy, pagtatanim, pagbawas ng plastik.

Inflation:

- Pagtaas ng presyo ng bilihin tulad ng bigas, kuryente, gasolina.
- Nagdudulot ng pagbaba ng purchasing power ng mamamayan.
- Tinitingnan sa pamamagitan ng *Consumer Price Index (CPI)*.

Kahirapan at Kawalan ng Trabaho:

- Epekto ng pandemya, inflation, at automation.

- Solusyon: edukasyon, entrepreneurship, agrikultura, digital economy.

Social Media Disinformation:

- Paglaganap ng fake news na nakaaapekto sa opinyon publiko.
- Kailangan ng media literacy at fact-checking.

📘 50-Item Full Mock Exam – Filipino & Araling Panlipunan

FILIPINO (Items 1–25)

1. Ano ang tawag sa salitang tumutukoy sa ngalan ng tao, hayop, lugar, bagay, o pangyayari?
A. Pandiwa
B. Pang-uri
C. Pangngalan
D. Pang-abay

2. Alin sa mga sumusunod ang wastong gamit ng “ng”?
A. Nag-aral siya ng maigi.
B. Gusto ko nang umalis.
C. Umulan ng malakas kagabi.
D. Bumili siya nang sapatos.

3. Anong uri ng pangungusap ang “Umuulan!”?
A. Padamdam
B. Pasalaysay
C. Pautos
D. Patanong

4. Alin sa mga sumusunod ang halimbawa ng pang-abay?
A. Maganda
B. Ngayon
C. Lamesa
D. Itim

5. Ang “masarap” ay anong bahagi ng pananalita?
A. Pangngalan
B. Pandiwa
C. Pang-abay
D. Pang-uri

6. Ano ang tamang gamit ng “nang” sa pangungusap?
A. Nagluto siya nang mabilis.
B. Kumain ng sopas si Ana.
C. Tinawag siya ng guro.
D. Naglaro ng basketball.

7. Alin sa mga sumusunod ang panghalip?
A. Ako
B. Tumatakbo
C. Mabango
D. Bundok

8. Ang pangungusap na “Kailan ka aalis?” ay anong uri?
A. Pasalaysay

B. Pautos
C. Patanong
D. Padamdam

9. Ang “Nagmamadali siya papunta sa paaralan.” ay anong uri ng pangungusap ayon sa layunin?
A. Pasalaysay
B. Pautos
C. Padamdam
D. Patanong

10. Ano ang wastong gamit ng “raw”?
A. Maganda raw ang panahon.
B. Umuulan daw kanina.
C. Sasama daw ako.
D. Wala raw silang pera.

11. Alin sa mga sumusunod ang antas ng wika na pampanitikan?
A. Tropa
B. Umalis
C. Marikit
D. Pare

12. Ang salitang “barkada” ay kabilang sa anong antas ng wika?
A. Kolokyal
B. Pampanitikan
C. Balbal
D. Pambansa

13. Ano ang kahulugan ng “paghampas ng alon sa kanyang damdamin”?
A. Naliligo siya
B. Malungkot siya
C. Masaya siya
D. Nagtataka siya

14. Ang paggamit ng “ikaw ay langit sa aking mata” ay anong tayutay?
A. Metapora
B. Simili

C. Pagmamalabis
D. Personipikasyon

15. Alin ang akda na nagpapakita ng aral at nagmula sa kultura?
A. Alamat
B. Nobela
C. Dula
D. Sanaysay

16. Ang “Pumunta ka rito” ay anong uri ng pangungusap?
A. Pautos
B. Patanong
C. Pasalaysay
D. Padamdam

17. Alin sa sumusunod ang pormal na antas ng wika?
A. Tsibog
B. Kumain
C. Ewan
D. Lodi

18. Ano ang gamit ng pang-ugnay na “sapagkat”?
A. Dahilan
B. Pagdaragdag
C. Konklusyon
D. Paghahalimbawa

19. “Ang guro ay mabait.” Ano ang simuno sa pangungusap?
A. Ay
B. Mabait
C. Ang guro
D. Guro

20. Alin sa mga sumusunod ang tamang gamit ng pang-abay sa pangungusap?
A. Tumakbo siya nang mabilis.
B. Maganda ang bulaklak.

C. Si Juan ay matalino.
D. Aso ang alaga niya.

21. Ang “Siya ay lumundag sa galak.” ay nagpapahiwatig ng:
A. Emosyon
B. Lokasyon
C. Panahon
D. Paraan

22. Alin ang tambalang salita?
A. Bahaghari
B. Gabi
C. Saging
D. Araw

23. Ano ang di-tuwirang layon sa pangungusap na “Nagbigay ng regalo si Ana sa bata”?
A. Ana
B. Regalo
C. Bata
D. Nagbigay

24. Anong bahagi ng pananalita ang “tumatawa”?
A. Pandiwa
B. Pang-uri
C. Pang-abay
D. Pangngalan

25. Ang “Sa wakas ay dumating na rin siya” ay nagpapahiwatig ng:
A. Emosyon
B. Pagkakasunod-sunod
C. Oras
D. Konklusyon

ARALING PANLIPUNAN (Items 26–50)

26. Sino ang itinuturing na Ama ng Katipunan?
A. Emilio Aguinaldo
B. Apolinario Mabini
C. Andres Bonifacio
D. Jose Rizal

27. Kailan idineklara ang kasarinlan ng Pilipinas mula sa Espanya?
A. Hunyo 12, 1898
B. Hunyo 30, 1896
C. Agosto 23, 1896
D. Setyembre 21, 1972

28. Alin sa sumusunod ang ehekutibong sangay ng pamahalaan?
A. Senado
B. Kongreso
C. Korte Suprema
D. Pangulo

29. Ilan ang rehiyon sa Pilipinas?
A. 13
B. 17
C. 18
D. 20

30. Ano ang tawag sa kabuuang halaga ng produkto at serbisyo sa isang bansa?
A. VAT
B. Inflation
C. GDP
D. Taripa

31. Anong sangay ng pamahalaan ang lumilikha ng batas?
A. Hudikatura
B. Lehislatura
C. Ehekutibo
D. Barangay

32. Ano ang karapatang bumoto at pumili ng pinuno?
A. Karapatang pantao
B. Karapatang sibil
C. Karapatang magtrabaho
D. Karapatang politikal

33. Alin sa mga sumusunod ang epekto ng climate change?
A. Pag-init ng mundo
B. Paglaki ng kita
C. Pagtaas ng GDP
D. Pag-ayos ng panahon

34. Ano ang pangunahing dahilan ng inflation?
A. Pagtaas ng demand
B. Pagtaas ng suplay
C. Pagbaba ng buwis
D. Pagliit ng populasyon

35. Alin sa mga sumusunod ang anyong lupa?
A. Ilog
B. Dagat
C. Bundok
D. Lawa

36. Ano ang tawag sa kilos-protesta noong Pebrero 1986?
A. Martial Law
B. Bagong Lipunan
C. EDSA Revolution
D. Independence Day

37. Sino ang unang pangulo ng Pilipinas?
A. Manuel Quezon
B. Jose Laurel
C. Emilio Aguinaldo
D. Apolinario Mabini

38. Ano ang pangunahing produkto ng rehiyon ng Bicol?
A. Abaka

B. Ginto
C. Mais
D. Saging

39. Ilan ang probinsya ng Pilipinas (as of 2025)?
A. 81
B. 82
C. 78
D. 80

40. Sino ang pambansang bayani ng Pilipinas?
A. Andres Bonifacio
B. Apolinario Mabini
C. Emilio Aguinaldo
D. Jose Rizal

41. Anong batas ang nagtatag ng Bill of Rights?
A. RA 9165
B. RA 1425
C. Saligang Batas
D. RA 10918

42. Ang “checks and balances” ay tumutukoy sa:
A. Pagkaisa ng pamahalaan
B. Paghahati ng kapangyarihan
C. Ugnayan ng barangay
D. Pagkontrol ng tao

43. Anong kasunduan ang nagtapos sa pananakop ng Espanya?
A. Treaty of Paris
B. Manila Accord
C. Mutual Defense Treaty
D. VFA

44. Ano ang tawag sa sistemang nagsasaad ng palitan ng produkto?
A. Suplay
B. Demand

C. Batas
D. Ekonomiya

45. Ano ang tawag sa pinagsama-samang mamimili at prodyuser?
A. GDP
B. Ekonomiks
C. Pamilihan
D. Suweldo

46. Anong sangay ng pamahalaan ang may kapangyarihang magdesisyon sa kaso?
A. Lehislatura
B. Ehekutibo
C. Hudikatura
D. Barangay

47. Ang GDP ay isang sukatan ng:
A. Populasyon
B. Presyo
C. Ekonomikong paglago
D. Produksyon ng bigas

48. Sino ang tinaguriang “Ina ng Katipunan”?
A. Gabriela Silang
B. Melchora Aquino
C. Gregoria de Jesus
D. Corazon Aquino

49. Ano ang tawag sa pagkakaroon ng iisang lider sa pamahalaan?
A. Demokrasya
B. Totalitaryo
C. Diktadurya
D. Monarkiya

50. Aling organisasyon ang layuning isulong ang kapayapaan sa Asya?
A. EU
B. UN

C. ASEAN
D. WHO

✅ Answer Key – Filipino (Items 1–25)

1. C – Pangngalan
2. C – Umulan ng malakas
3. A – Padamdam
4. B – Ngayon
5. D – Pang-uri
6. A – Nang mabilis
7. A – Ako
8. C – Patanong
9. A – Pasalaysay
10. A – Raw (vowel sound rule)
11. C – Marikit (pampanitikan)
12. A – Kolokyal

13. B – Malungkot siya

14. A – Metapora

15. A – Alamat

16. A – Pautos

17. B – Kumain

18. A – Dahilan

19. C – Ang guro

20. A – Tumakbo siya nang mabilis

21. A – Emosyon

22. A – Bahaghari

23. C – Bata

24. A – Pandiwa

25. C – Oras

✅ **Answer Key – Araling Panlipunan (Items 26–50)**

26. C – Andres Bonifacio

27. A – Hunyo 12, 1898

28. D – Pangulo

29. B – 17

30. C – GDP

31. B – Lehislatura

32. D – Karapatang politikal

33. A – Pag-init ng mundo

34. A – Pagtaas ng demand

35. C – Bundok

36. C – EDSA Revolution

37. C – Emilio Aguinaldo

38. A – Abaka

39. A – 81

40. D – Jose Rizal

41. C – Saligang Batas

42. B – Paghahati ng kapangyarihan

43. A – Treaty of Paris

44. D – Ekonomiya

45. C – Pamilihan

46. C – Hudikatura

47. C – Ekonomikong paglago

48. B – Melchora Aquino

49. D – Monarkiya

50. C – ASEAN

Logic & Abstract Reasoning – ELABORATION + SAMPLE QUESTIONS

🔢 1. Number & Letter Series

- **Concept**: Spot the pattern in numbers or letters.
- **Example**:
    - 2, 4, 8, 16, __ → *Answer: 32 (multiply by 2)*
    - A, C, E, G, __ → *Answer: I (skip 1 letter each time)*

🔁 2. Analogies (Verbal & Visual)

- **Verbal Analogy Example**:
    - Leg : Walk :: Wing : ___ → *Answer: Fly*
- **Visual Analogy**:
    - [Shape] is to [Shape 2] as [Shape 3] is to ___ (choose from options that follow the pattern).

🧩 3. Pattern Recognition

- **Concept**: Shapes follow a visual sequence. Look for changes in direction, color, number.
- **Example**: A triangle rotates 90° clockwise every image. What comes next?

🚫 4. Odd-One-Out

- **Concept**: Find the item that doesn't belong.
- **Example**:
    - Apple, Banana, Carrot, Mango → *Answer: Carrot (a vegetable)*

🧭 5. Directional Reasoning

- **Concept**: Movement and orientation problems.
- **Example**:
    - You face East and turn 90° left, what direction now? → *Answer: North*

🔍 6. Mirror & Water Images

- **Concept**: Recognize mirror (horizontal) or water (vertical) flipped versions.
- **Example**:
    - If a clock reads 4:30, what is the mirror image? → *Answer: 7:30*

🧠 7. Matrix Problems

- **Concept**: 3×3 grids with sequences across rows/columns.
- **Example**:
    - Top row: ● ▲ ○
    - Middle: ▲ ○ ?
    - What completes the pattern? → *Answer:* ●

🔄 8. Syllogisms

- **Concept**: Deductive logic.
- **Example**:
    - All birds have wings. Parrot is a bird. → *Conclusion: Parrot has wings – TRUE*

🗒️ 9. Statement & Conclusion

- **Concept**: Determine logical validity.
- **Example**:
    - Statement: All cats are animals. Conclusion: Some animals are cats. → *Valid? YES*

✅ General Information & Current Events – ELABORATION + SAMPLE QUESTIONS

🇵🇭 1. Philippine History

- **Key Focus**: Revolutions (Katipunan), Presidents (Aguinaldo, Marcos, Duterte, etc.), Heroes (Rizal, Bonifacio).
- **Sample Q**:
    - Who founded the Katipunan? → *Answer: Andres Bonifacio*

🏛️ 2. Constitution & Government Branches

- **Key Focus**: Three branches, roles, 1987 Constitution.
- **Sample Q**:
    - Which branch interprets the law? → *Answer: Judiciary*

🇵🇭 3. National Symbols & Identity

- **Sample Q**:
    - What is the national tree of the Philippines? → *Answer: Narra*

🗺️ 4. Philippine Geography

- **Sample Q**:
    - What is the highest mountain in the Philippines? → *Answer: Mt. Apo*

📊 5. Economics Basics

- **Sample Q**:
    - If supply increases but demand stays the same, what happens to the price? → *Answer: It goes down*

🧠 6. Social Science Trivia

- **Sample Q**:
    - Who developed the Hierarchy of Needs? → *Answer: Maslow*

👨‍🔬 7. Notable Psychologists

- **Sample Q**:
    - Who is known for the concept of Operant Conditioning? → *Answer: B.F. Skinner*

📜 8. Philippine Psychology History

- **Sample Q**:
    - What law governs professional psychology in the Philippines? → *Answer: RA 10029*

🌍 9. Current Events

- **Topics**: Inflation, national budget, education reforms, mental health initiatives.
- **Sample Q**:

- As of 2025, what agency is leading PH climate adaptation efforts? → *Answer: DENR*

🌐 10. Global Awareness

- **Sample Q**:
  - What does ASEAN stand for? → *Association of Southeast Asian Nations*

🧠 50-Item Logic & Abstract Reasoning Mock Exam with Answers

✅ PART I: Number & Letter Series (1–10)

1. **2, 4, 8, 16, ___**
   A. 24 B. 30 C. 32 ✅ D. 36
   Explanation: Multiply by 2 each time: 2×2 = 4, 4×2 = 8... so 16×2 = 32.

2. **5, 10, 20, ___, 80**
   A. 30 B. 40 ✅ C. 35 D. 50
   Explanation: Multiply by 2: 5×2=10, 10×2=20, so 20×2=40.

3. **A, C, E, G, ___**
   A. H B. I ✅ C. J D. K
   Explanation: Skip 1 letter each time (A-B-C-D-E...).

4. **100, 97, 91, 82, ___**
   A. 70 ✅ B. 75 C. 71 D. 60
   Explanation: Subtracting: -3, -6, -9... next is -12 → 82-12=70.

5. **B2, D4, F6, ___**
   A. G8 B. H8 ✅ C. H10 D. J10
   Explanation: Letters go +2 (B, D, F, H), numbers +2 (2, 4, 6, 8).

6. **Z, X, V, T, ___**
   A. S B. Q ✅ C. R D. P
   Explanation: Skip 1 letter in reverse order: Z, X, V, T, then R, P → answer is **R**, but R is not listed. Correction: **Answer is R** (C).

7. **15, 12, 9, 6, ___**
   A. 0 B. 4 C. 3 ✅ D. 1
   Explanation: Subtract 3 each time: 6 - 3 = 3.

8. **1, 4, 9, 16, ___**
   A. 20 B. 25 ✅ C. 30 D. 36

Explanation: Perfect squares: 1^2, 2^2, 3^2, 4^2 → next is $5^2 = 25$.

9. **C, F, I, L, ___**
   A. M B. N C. O ✅ D. P
   Explanation: +3 letters each time (C→F→I→L→O).

10. **AZ, BY, CX, ___**
    A. DU ✅ B. EV C. DW D. EX
    Explanation: First letters go A→B→C→D, last letters Z→Y→X→W. Answer: **DW** (C).

🔁 PART II: Analogies (11–15)

11. **Fish : Swim :: Bird : ___**
    A. Fly ✅ B. Nest C. Tweet D. Feather
    Explanation: Fish swims, bird flies — both natural movement.

12. **Eye : See :: Ear : ___**
    A. Hear ✅ B. Touch C. Smell D. Balance
    Explanation: Function of the ear is to hear.

13. **Pen : Write :: Brush : ___**
    A. Draw B. Paint ✅ C. Sweep D. Rub
    Explanation: A brush is used to paint, like a pen is used to write.

14. **Fire : Heat :: Ice : ___**
    A. Freeze B. Melt C. Cold ✅ D. Water
    Explanation: Fire gives off heat, ice brings cold.

15. **Bird : Nest :: Bee : ___**
    A. Hive ✅ B. Flower C. Sting D. Tree
    Explanation: Bird lives in a nest, bee lives in a hive.

🧩 PART III: Pattern Recognition (16–20)

16. ◯ ▲ ◯ ▲ ◯ ___
    A. ▲ ✅ B. ◯ C. ■ D. ●
    Explanation: Alternating circle and triangle.

17. ⬛⬛⬜⬛⬛⬜⬛⬛___
    A. ⬛ B. ⬜ ✅ C. ■ D. ⬤
    Explanation: Every third shape is white.

18. ▫ ▫ ▫ ▫ △ △ △ △ ___
    A. △ ✅ B. ▫ C. ◯ D. ■
    Explanation: First 4 squares, then 4 triangles. Next: another triangle.

19. **Up, Down, Up, Down, ___**
    A. Up ✅ B. Down C. Left D. Stay
    Explanation: Obvious pattern alternates.

20. **1, 4, 2, 5, 3, ___**
    A. 6 ✅ B. 7 C. 8 D. 4
    Explanation: Alternate between +3, -2: 1→4→2→5→3→6.

🚫 PART IV: Odd-One-Out (21–25)

21. **Apple, Banana, Carrot, Mango**
    ✅ Carrot – it's a vegetable, the rest are fruits.

22. **Triangle, Square, Rectangle, Circle**
    ✅ Circle – only shape without straight lines.

23. **Monday, Tuesday, July, Wednesday**
    ✅ July – it's a month, rest are days.

24. **Pen, Pencil, Eraser, Paint**
    ✅ Paint – used for coloring, not writing/erasing.

25. **Cat, Dog, Lion, Car**
    ✅ Car – not an animal.

🧭 PART V: Directional Reasoning (26–30)

26. You face North and turn right 90°. Which direction now?
    ✅ East

27. Facing East, turn 180°. You now face:
    ✅ West

28. Facing South, turn left 90°. You now face:
    ✅ East

29. You start facing North. Turn 270° clockwise. Now facing?
    ✅ West

30. From East, turn left 90°, then right 180°. Final direction?
    ✅ West

🔍 PART VI: Mirror & Water Images (31–35)

(*Use logic-based visualization*)

31. In a **mirror**, "L" will appear as:
    ✅ Reversed horizontally (like a ⅃)

32. In water reflection, the word "TOP" appears as:
    ✅ “POT” upside down.

33. Which letter looks the same in a mirror?
    ✅ “O”

34. Number 3 in a mirror:
    ✅ Looks like reversed “3” (like an E).

35. Word “MOM” in mirror remains:
    ✅ MOM – symmetrical.

🧠 PART VII: Matrix & Logic (36–40)

36. If Row A is Red, Blue, Green — Row B is Green, Red, ___
    ✅ Blue

37. In a grid, if each row adds up to 15, and two numbers are 5 and 6, the third is:
    ✅ 4

38. What comes next in pattern? ▲ ◯ ■, ◯ ■ ▲, ■ ▲ ◯, ___
    ✅ Repeats first group: ▲ ◯ ■

39. Which symbol is missing in a 3×3 grid:
    ✅ Choose symbol that completes pattern by rows/columns logic.

40. Logic puzzle: If all tigers are cats, and all cats purr, then all tigers ___
    ✅ Purr

🔄 PART VIII: Syllogisms (41–45)

41. All humans are mortal. Socrates is human. So, Socrates is?
    ✅ Mortal

42. All fruits have seeds. Mango has seeds. Mango is a?
    ✅ Fruit

43. All dogs bark. Max is a dog. Max?
    ✅ Barks

44. No birds are mammals. All parrots are birds. So, parrots are not?
    ✅ Mammals

45. All squares are rectangles. But not all rectangles are?
    ✅ Squares

🗒️ PART IX: Statement & Conclusion (46–50)

46. **Statement:** All apples are fruits. Some fruits are sweet.
    Conclusion: All apples are sweet. → ❌ **Incorrect**

47. **Statement:** Some nurses are women. All women are humans.
    Conclusion: Some nurses are humans. → ✅ **Correct**

48. **Statement:** No reptiles fly. All snakes are reptiles.
    Conclusion: No snakes fly. → ✅ **Correct**

49. **Statement:** All students love recess. Anna is a student.
    Conclusion: Anna loves recess. → ✅ **Correct**

50. **Statement:** Some cars are electric. Some electric things are bikes.
    Conclusion: All cars are bikes. → ❌ **Incorrect**

📆 50-Item Current Events (2024–2025) Mock Exam with answers.

🧠 PART I: Multiple Choice (1–40)

1. What is the projected GDP growth of the Philippines in 2025 according to NEDA?
   A. 5.0%
   B. 5.5% ✅
   C. 6.2%
   D. 7.0%

   Answer: B – NEDA projects around 5.5% GDP growth for 2025.

2. The current inflation rate (as of mid-2025) is mostly caused by:
   A. Overpopulation
   B. Importation of goods
   C. Oil price hikes ✅

D. Excessive rainfall

Answer: C – Global fuel prices continue to impact inflation.

3. Who is the current President of the Philippines (2025)?
   A. Leni Robredo
   B. Bongbong Marcos ✅
   C. Sara Duterte
   D. Isko Moreno

Answer: B – Ferdinand "Bongbong" Marcos Jr. is the sitting president.

4. What major education program was launched to help Grade 12 graduates become job-ready?
   A. K-12
   B. TESDA Bootcamp
   C. MATATAG Curriculum ✅
   D. Build Better Schools

Answer: C – MATATAG is part of the new DepEd reform to improve K-10.

5. The Philippines is part of this regional organization focused on Southeast Asian unity:
   A. OPEC
   B. EU
   C. UN
   D. ASEAN ✅

Answer: D – ASEAN promotes peace and cooperation among SE nations.

6. Which country recently hosted the 2024 Summer Olympics?
   A. Japan
   B. France ✅

C. Brazil
D. USA

Answer: B – Paris, France hosted the 2024 Olympics.

7. What is the Philippine national ID system called?
   A. PhilPass
   B. PhilSys ✅
   C. IDPhil
   D. PinoyCard

Answer: B – PhilSys is the official National ID system.

8. RA 11934, also known as the SIM Registration Act, was passed to combat:
   A. Fake diplomas
   B. Online scams ✅
   C. Overpricing
   D. Immigration fraud

Answer: B – SIM registration law aims to reduce spam and fraud.

9. What is the name of the satellite launched by the Philippines for disaster monitoring?
   A. Maya-2 ✅
   B. Agila
   C. Bantay Kalikasan
   D. Saranggola

Answer: A – Maya-2 is one of the Philippine-made nanosatellites.

10. Which department handles disaster response in the Philippines?
    A. DepEd
    B. NDRRMC ✅

C. DOST
D. DFA

Answer: B – National Disaster Risk Reduction and Management Council.

11. In April 2025, the PH experienced severe water shortage in Metro Manila due to:
    A. Earthquake
    B. Typhoon
    C. El Niño ✅
    D. Low pressure area

Answer: C – El Niño causes dry spells and drought.

12. In 2025, what tech innovation is being explored in PH healthcare?
    A. Robotic nurses
    B. AI-powered diagnostics ✅
    C. Self-driving ambulances
    D. Teleportation booths

Answer: B – AI in diagnosis and triage is a growing trend.

13. The “Balik Scientist Program” promotes:
    A. Returning OFWs
    B. Filipino scientists to serve locally ✅
    C. Teaching Balik-Aral students
    D. Science fiction authors

Answer: B – It encourages Filipino scientists abroad to return.

14. As of 2025, the **highest minimum wage** is granted in which region?
    A. NCR ✅
    B. Region 2
    C. Region 4A

D. CAR

Answer: A – NCR has the highest daily minimum wage in the country.

15. Who is the current Secretary of Education (DepEd) as of 2025?
    A. Leonor Briones
    B. Sara Duterte ✅
    C. Chel Diokno
    D. Chiz Escudero

Answer: B – Sara Duterte is still leading DepEd as of 2025.

16. The EDSA People Power Revolution is commemorated every:
    A. January 15
    B. February 25 ✅
    C. March 18
    D. April 9

Answer: B – February 25 marks the peaceful 1986 uprising.

17. What Philippine law protects mental health rights?
    A. RA 10918
    B. RA 11036 ✅
    C. RA 11223
    D. RA 9165

Answer: B – RA 11036 is the Mental Health Act.

18. The Philippine peso weakened due to which global event in 2024?
    A. UN conference
    B. COVID resurgence
    C. Middle East conflict ✅

D. ASEAN travel ban

Answer: C – Regional conflicts affected oil and currency.

19. What is the main goal of the Build, Better, More program?
    A. Vaccine distribution
    B. Infrastructure development ✅
    C. Food subsidies
    D. Internet law enforcement

Answer: B – It continues infrastructure projects.

20. What new transport line opened in 2024 to help decongest Metro Manila?
    A. SkyTrain
    B. MRT-7 ✅
    C. LRT-5
    D. EDSAloop

Answer: B – MRT-7 began partial operations in late 2024.

21. What is “EDSA Busway” known for?
    A. Sky buses
    B. Dedicated bus lane in EDSA ✅
    C. Underground buses
    D. Water taxis

Answer: B – Exclusive lane for city buses along EDSA.

22. In 2024, who won the Nobel Peace Prize for fighting AI disinformation?
    A. Elon Musk
    B. Maria Ressa
    C. Narges Mohammadi

D. A global AI research team ✅

Answer: D – Recognized for promoting responsible AI.

23. What environmental issue hit Mindoro in 2024?
    A. Earthquake
    B. Oil spill ✅
    C. Forest fire
    D. Mining collapse

Answer: B – Oil spill greatly affected marine life.

24. Which COVID-19 variant caused a minor surge in 2024?
    A. Alpha
    B. Delta
    C. JN.1 ✅
    D. Sigma

Answer: C – JN.1 variant created temporary waves.

25. What is the national vaccination campaign for young children called?
    A. Bakunado Bata
    B. Chikiting Ligtas ✅
    C. Baby Shots
    D. Toddlers First

Answer: B – Aimed to boost vaccination rates for kids.

26. What Filipino film won international recognition in 2024?
    A. Family Matters
    B. On the Job 2
    C. Topakk

D. Leonor Will Never Die ✅

Answer: D – Won awards in international film fests.

27. What law institutionalizes “No Homework on Weekends” policy?
    A. House Bill 5500
    B. DepEd Memo
    C. Senate Bill 966 ✅
    D. CHED MOA 321

Answer: C – SB 966 encourages student rest days.

28. What is the latest technology explored in UP Diliman for disaster alerts?
    A. Smart sirens
    B. AI Earthquake Detector ✅
    C. Drones
    D. Satellite bombs

Answer: B – AI-based detection being piloted.

29. What does DOST stand for?
    A. Department of Science and Technology ✅
    B. Division of Strategic Transport
    C. Department of Services and Training
    D. Digital Security Team

Answer: A

30. Who is the Vice President of the Philippines as of 2025?
    A. Leni Robredo
    B. Kiko Pangilinan
    C. Sara Duterte ✅

D. Chiz Escudero

Answer: C

31. What UN goal focuses on education for all?
    A. SDG 1
    B. SDG 3
    C. SDG 4 ✅
    D. SDG 5

Answer: C – Quality education.

32. Who heads the Department of Health (2025)?
    A. Ted Herbosa ✅
    B. Francisco Duque
    C. Vergeire
    D. Carl Balita

Answer: A

33. What is the youth wing of the Sangguniang Kabataan?
    A. KKK
    B. SK Youth Council ✅
    C. Kabataang Barangay
    D. Young Assembly

Answer: B

34. The Philippines rejoined this global group in 2024 to combat poverty:
    A. World Bank ✅
    B. BRICS
    C. IMF

D. OPEC

Answer: A

35. A key issue during the 2025 Barangay elections was:
    A. Drought
    B. Voter buying ✅
    C. Earthquake
    D. Fake ballots

Answer: B

36. In 2025, CHED pushed for what learning method in state colleges?
    A. Full face-to-face
    B. All online
    C. HyFlex or hybrid ✅
    D. Radio-based

Answer: C

37. What's the effect of high inflation?
    A. Cheaper goods
    B. Higher purchasing power
    C. Prices go up ✅
    D. Increase in exports

Answer: C

38. The PH joined this climate fund program:
    A. Green Climate Fund ✅
    B. Tree4U
    C. Save Earth Now

D. ASEAN Carbon Bank

Answer: A

39. What is “Hunger Games PH”?
    A. Protest name against food insecurity ✅
    B. TikTok trend
    C. Board game
    D. Festival

Answer: A

40. What typhoon in late 2024 devastated Northern Luzon?
    A. Typhoon Yolanda
    B. Typhoon Egay ✅
    C. Typhoon Odette
    D. Typhoon Dindo

Answer: B

✍️ PART II: True or False (41–50)

41. T/F – RA 11036 is the Mental Health Act. ✅

42. T/F – MRT-7 is already fully completed as of 2025. ❌

43. T/F – PhilHealth is under the Department of Health. ✅

44. T/F – El Niño causes heavy rains and floods. ❌

45. T/F – Sara Duterte is both Vice President and DepEd Secretary. ✅

46. T/F – The Philippines is NOT a member of the UN. ❌

47. T/F – SIM Registration Act was passed to protect online privacy. ✅

48. T/F – ASEAN has 15 member nations. ❌ (It has 10)

49. T/F – Global warming is linked to stronger typhoons. ✅

50. T/F – Paris hosted the 2024 Olympics. ✅

🌍 50-Item Mock Exam – Global Awareness & Current Events (2024–2025)

🗂️ PART I: Multiple Choice (1–40)

1. Which year was the 17 Sustainable Development Goals (SDGs) adopted by the UN?
   A. 2005
   B. 2010
   C. 2015 ✅
   D. 2020
   Answer: C – Adopted in 2015 to guide global development.

2. The UN body responsible for refugees is:
   A. UNICEF
   B. WHO
   C. UNHCR ✅
   D. UNESCO
   Answer: C – UNHCR supports displaced persons.

3. ASEAN currently has ___ member countries.
   A. 8
   B. 10 ✅
   C. 12
   D. 14
   Answer: B – Includes the Philippines and nine others.

4. ASEAN was founded in which year?
   A. 1961
   B. 1965 ✅
   C. 1971
   D. 1975
   Answer: B – Established with the Bangkok Declaration.

5. Which is not an ASEAN goal?
   A. Economic cooperation
   B. Military alliance ✅
   C. Social progress
   D. Cultural development
   Answer: B – ASEAN isn't a military pact.

6. The Philippines joined ASEAN in:
   A. 1967 ✅
   B. 1970
   C. 1975
   D. 1980
   Answer: A – A founding signatory.

7. Global warming is primarily caused by:
   A. Volcanic eruptions
   B. Greenhouse gas emissions ✅
   C. Solar cycles
   D. Deforestation only
   Answer: B – CO_2 and other gases trap heat.

8. The Paris Agreement targets keeping temperature rise under:
   A. 1°C
   B. 1.5°C
   C. 2°C ✅
   D. 3°C
   Answer: C – Limit to under 2 °C.

9. The Philippines submitted its climate plan (NDC) in:
   A. 2016
   B. 2018 ✅

C. 2020
D. 2022
Answer: B – Part of Paris Agreement commitments.

10. Which war escalated in 2024–25?
    A. Russia–Ukraine
    B. Israel–Iran tensions ✅
    C. India–Pakistan
    D. North vs South Korea
    Answer: B – Airstrikes and regional tension.

11. U.S. President as of 2025 is:
    A. Joe Biden
    B. Donald Trump ✅
    C. Kamala Harris
    D. Hillary Clinton
    Answer: B – Trump inaugurated January 2025.

12. Trump's Vice President is:
    A. Mike Pence
    B. Ron DeSantis
    C. J.D. Vance ✅
    D. Tim Scott
    Answer: C – From the 2025 administration.

13. Which Pope was elected in 2025?
    A. Francis II
    B. Benedict XVII
    C. Leo XIV ✅
    D. Pius XIV
    Answer: C – Cardinal Prevost chose Leo XIV.

14. Pope Leo XIV is the first Pope from:
    A. Africa
    B. Asia
    C. Americas ✅
    D. Europe

Answer: C – First American Pope.

15. The inauguration Mass of Pope Leo XIV was held:
    A. April 2025
    B. May 2025 ✅
    C. June 2025
    D. July 2025
    Answer: B – Held at St. Peter's in May.

16. The Philippines' latest satellite launched for disaster monitoring is:
    A. Agila-1
    B. Maya-2 ✅
    C. Bantay
    D. Tala
    Answer: B – Maya-2 is an eco-satellite.

17. The PH national ID system is called:
    A. PhilPass
    B. PhilSys ✅
    C. PHID
    D. PINOY
    Answer: B – Used for government identification.

18. SIM Registration Act (RA 11934) aims to combat:
    A. Mobile phone theft
    B. Spam and scams ✅
    C. Forged credentials
    D. Illicit trading
    Answer: B – Reduces anonymous messaging fraud.

19. The PH government agency for disaster response is:
    A. DOST
    B. DepEd
    C. NDRRMC ✅
    D. CHED
    Answer: C – Coordinates natural disaster efforts.

20. El Niño in 2025 impacted Metro Manila by causing:
    A. Typhoons
    B. Drought ✅
    C. Floods
    D. Earthquakes
    Answer: B – El Niño caused water shortages.

21. The latest transport line that opened in Metro Manila is:
    A. LRT-5
    B. MRT-7 ✅
    C. SkyTrain
    D. EDSA Loop
    Answer: B – Transit line to the north.

22. The Nobel Peace Prize 2024 went to:
    A. Maria Ressa
    B. Global AI team ✅
    C. Greta Thunberg
    D. UNHCR
    Answer: B – For fighting AI disinformation.

23. The PH's 'Balik Scientist Program' encourages:
    A. Overseas OFW returnees
    B. Local scientists to return ✅
    C. Science teachers abroad
    D. Sci-fi writers
    Answer: B – Brings international researchers home.

24. The Metro Manila water shortage was tied to:
    A. Overpopulation
    B. Deforestation
    C. El Niño ✅
    D. Infrastructure failure
    Answer: C – Drought conditions created shortage.

25. AI-powered diagnostics in PH hospitals began in:
    A. 2023
    B. 2024

C. 2025 ✅
D. 2026
Answer: C – Tested in major medical centers.

26. The Build Better More program focuses on:
A. Healthcare
B. Infrastructure ✅
C. Agriculture
D. Food security
Answer: B – Continuation of infrastructure builds.

27. EDSA People Power is commemorated on:
A. Feb 22
B. Feb 25 ✅
C. Mar 1
D. Apr 9
Answer: B – National holiday marking 1986 revolution.

28. Mental Health Act in PH is RA:
A. 11036 ✅
B. 10918
C. 11223
D. 9165
Answer: A – Protects mental healthcare rights.

29. The PH peso weakened in 2025 due to:
A. El Niño
B. Middle East conflict ✅
C. PH elections
D. ASEAN trade policy
Answer: B – Geopolitical fuel price impact.

30. The national vaccination program for children is called:
A. Bakunado Bata
B. Chikiting Ligtas ✅
C. Baby Shots
D. Toddlers First

Answer: B – To boost pediatric immunization.

31. Which organization did PH rejoin in 2024 to address poverty?
    A. IMF
    B. World Bank ✅
    C. BRICS
    D. OPEC
    Answer: B – World Bank funding resumed.

32. A key issue during the 2025 barangay elections was:
    A. Climate change
    B. Vote-buying ✅
    C. Youth turnout
    D. Education reforms
    Answer: B – Reports of vote-buying emerged.

33. CHED endorsed which class structure in 2025?
    A. All face-to-face
    B. Online only
    C. HyFlex ✅
    D. Modular
    Answer: C – Mix of online & physical formats.

34. Which climate fund did the PH join?
    A. Green Climate Fund ✅
    B. Tree4U
    C. Save Earth
    D. ASEAN Climate Bank
    Answer: A – For carbon reduction projects.

35. “Hunger Games PH” refers to:
    A. TV show
    B. Protest on food insecurity ✅
    C. School campaign
    D. Game tournament
    Answer: B – A call against rising hunger.

36. Typhoon Egay hit northern Luzon in:
    A. 2023
    B. 2024 ✅
    C. 2025
    D. 2026
    Answer: B – Brought heavy rainfall and floods.

37. Typhoon Odette occurred in:
    A. 2020
    B. 2021 ✅
    C. 2022
    D. 2023
    Answer: B – One of the deadliest typhoons.

38. PH Secretary of Education in 2025 is:
    A. Leonor Briones
    B. Sara Duterte ✅
    C. Tony Tan Caktiong
    D. Chel Diokno
    Answer: B – Currently holding the DepEd post.

39. Department of Health in 2025 is led by:
    A. Francisco Duque
    B. Ted Herbosa ✅
    C. Maria Rosario Vergeire
    D. Teodoro Kalaw
    Answer: B – Appointed in 2025.

40. UN Sustainable Development Goal for quality education is:
    A. SDG 1
    B. SDG 3
    C. SDG 4 ✅
    D. SDG 5
    Answer: C – SDG 4 promotes lifelong learning.

✅ PART II: True or False (41–50)

41. T/F – The U.S. President as of 2025 is Donald Trump. ✅
42. T/F – Pope Leo XIV is the first European Pope since Benedict XVI. ❌
43. T/F – The Philippines is a founding member of ASEAN. ✅
44. T/F – El Niño causes increased rainfall across Metro Manila. ❌
45. T/F – RA 11036 is the Philippine Mental Health Law. ✅
46. T/F – Maya-2 is a Philippine-made military satellite. ❌
47. T/F – The Green Climate Fund targets carbon emission funding. ✅
48. T/F – Vote-buying controversies were absent in the 2025 barangay elections. ❌
49. T/F – MRT-7 is a transport line serving Metro Manila. ✅
50. T/F – The Hunger Games PH refers to healthy eating programs. ❌

50-item General Knowledge Mock Exam covering **Science, Math, English, Geography**, and **World Events**—complete with answers. Perfect for sharpening a well-rounded mind!

🔬 Science (Items 1–10)

1. **What is the powerhouse of the cell?**
   → **Mitochondria**

2. **What planet is known as the Red Planet?**
   → **Mars**

3. **What is H_2O commonly known as?**
   → **Water**

4. **What force pulls objects toward Earth?**
   → **Gravity**

5. **What is the chemical symbol for sodium?**
   → **Na**

6. **Which organ filters blood and produces urine?**
   → **Kidney**

7. **What gas do plants produce during photosynthesis?**
   → **Oxygen**

8. **What is the speed of light (approx.) in vacuum?**
   → **300,000 km/s**

9. **What type of bond forms by sharing electrons?**
   → **Covalent bond**

10. **What branch studies the inheritance of traits?**
    → **Genetics**

➗ Math (Items 11–20)

11. **What is 15% of 200?**
    → **30**

12. **Solve for x: 2x + 5 = 17.**
    → **x = 6**

13. **What is the area of a circle with radius 7?** (Use π≈3.14)
    → **≈153.94**

14. **What is the next number: 2, 6, 18, 54, ___?**
    → **162** (×3 pattern)

15. **What is the mean of 5, 7, 9, 11, 13?**
    → **9**

16. **Convert 0.75 to a fraction.**
    → **¾**

17. **What is the value of π to two decimals?**
    → **3.14**

18. **What is 8^3?**
    → **512**

19. **What is the perimeter of a 4×6 rectangle?**
    → **20**

20. **Solve: 12 ÷ (2 + 4) = ___?**
    → **2**

📐 English (Items 21–30)

21. **Identify the noun in: "The cat chased the mouse."**
    → **cat, mouse**

22. **“She sings beautifully.” – what part of speech is “beautifully”?**
    → **Adverb**

23. **What is the antonym of “ancient”?**
    → **Modern**

24. **Choose the correct homophone: “Their/There/They’re going home.”**
    → **They’re**

25. **What type of sentence is “Close the door.”?**
    → **Imperative**

26. **What tense: “They had finished before noon.”?**
    → **Past perfect**

27. **Turn passive: “She wrote the letter.”**
    → **The letter was written by her.**

28. **Find the preposition: “The book is on the table.”**
    → **on**

29. **What is the synonym of “happy”?**
    → **Joyful**

30. **What is the main idea? "Regular exercise boosts mood, energy, heart health."**

→ **Exercise improves well-being**

🌍 Geography (Items 31–40)

31. **What is the longest river in the world?**
    → **Nile**

32. **What mountain is the tallest on Earth?**
    → **Mount Everest**

33. **Which country is the largest by area?**
    → **Russia**

34. **What is the capital of Japan?**
    → **Tokyo**

35. **What ocean lies west of the Americas?**
    → **Pacific Ocean**

36. **Which country has the highest population?**
    → **China**

37. **What is the capital of the Philippines?**
    → **Manila**

38. **Which desert is the largest hot desert?**
    → **Sahara**

39. **Name the continent with the most countries.**
    → **Africa**

40. **Which country is known as the Land of the Rising Sun?**
    → **Japan**

🌐 World Events & Current Affairs (Items 41–50)

41. **Who became Pope in May 2025?**
    → Leo XIV

42. **Who is the U.S. President as of 2025?**
    → Donald Trump

43. **Which country hosted the 2024 Olympics?**
    → France

44. **Name the regional political bloc that includes the Philippines.**
    → ASEAN

45. **What major climate treaty aims to limit global warming to under 2 °C?**
    → Paris Agreement

46. **Which Middle Eastern conflict escalated in early 2025?**
    → Israel–Iran tensions

47. **What is the United Nations agency for health issues?**
    → World Health Organization (WHO)

48. **Which UN Sustainable Development Goal focuses on “Quality Education”?**
    → SDG 4

49. **Name the major global AI-related peace prize winner in 2024.**
    → Global AI research team

50. **Which international fund aids developing countries' climate mitigation?**
    → Green Climate Fund

50-item mock test emulating typical ICCT entrance topics, complete with answers.

🔬 **Science (1–10)**

1. **What instrument measures air pressure?**
   A. Barometer ✅

2. **Which gas is most abundant in Earth's atmosphere?**
   A. Nitrogen ✅

3. **What is the powerhouse of the cell?**
   C. Mitochondria ✅

4. **Which planet is known for its rings?**
   B. Saturn ✅

5. **What type of bond involves sharing electrons?**
   C. Covalent ✅

6. **What is H_2O?**
   A. Water ✅

7. **Which layer of Earth is liquid?**
   B. Outer core ✅

8. **What causes seasons on Earth?**
   A. Tilt of Earth's axis ✅

9. **What process converts water vapor into liquid?**
   C. Condensation ✅

10. **What is the basic unit of matter?**
    B. Atom ✅

➗ Math (11–20)

11. **$2x + 3 = 11 \rightarrow x = ?$**
    A. 4 ✅

12. **What is 30% of 150?**
    C. 45 ✅

13. **Area of rectangle 5×8 = ?**
    B. 40 ✅

14. **$\sqrt{81} = ?$**
    B. 9 ✅

15. **What's the mean of [5,10,15]?**
    C. 10 ✅

16. **Convert ¾ to decimal.**
    A. 0.75 ✅

17. **5^3 = ?**
    B. 125 ✅

18. **12/4 = ?**
    A. 3 ✅

19. **If y = 2x and x = 5, y = ?**
    D. 10 ✅

20. **What is the perimeter of a square with side 6?**
    C. 24 ✅

📘 English (21–30)

21. **“She writes beautifully.” – Identify adverb.**
    A. beautifully ✅

22. **Antonym of “ancient”?**
    C. Modern ✅

23. **Homophone for “their”?**
    B. there ✅

24. **What is passive voice form of “He reads the book”?**
    D. The book is read by him. ✅

25. **What part of speech is “and”?**
    B. Conjunction ✅

26. **Plural of “child”?**
    C. Children ✅

27. **What tense: “She had eaten”?**
    D. Past perfect ✅

28. **Correct spelling: “accomodate” or “accommodate”?**
    B. accommodate ✅

29. **What is a synonym of “happy”?**
    A. joyful ✅

30. **Choose the complete sentence.**
    C. I enjoy reading. ✅

🧩 Logical Reasoning (31–40)

31. **Number series: 5,10,20,40, ___**
    B. 80 ✅

32. **Letter series: A, C, E, ___**
    C. G ✅

33. **Odd one out: apple, banana, carrot, mango**
    C. carrot ✅

34. **Fish : Swim :: Bird : ___**
    A. Fly ✅

35. **Shape pattern: ◯ ▲ ◯ ▲ __**
    B. ▲ ✅

36. **Which is a mirror of ‘E’?**
    C. Ǝ ✅

37. **Facing North, turn right → face?**
    B. East ✅

38. **Syllogism: All dogs bark. Max is a dog. Max barks.**
    True ✅

39. **Conclusion test: All apples are fruit. All fruits grow on trees. All apples grow on trees.**
    True ✅

40. **Matrix: A1,B2,C3; D4,E5,?**
    F6 ✅

🌍 General Awareness & Current Events (41–50)

41. **UN SDG for Quality Education is SDG**
    4 ✅

42. **ASEAN has how many member countries?**
    10 ✅

43. **PhilSys is the Philippines' _____ system.**
    B. National ID ✅

44. **U.S. President in 2025?**
    Trump ✅

45. **Philippine pope elected 2025?**
    Leo XIV ✅

46. **Climate treaty: Paris Agreement limits to under ___°C?**
    2 °C ✅

47. **Global AI group won the 2024 Nobel Peace Prize?**
    Yes ✅

48. **Middle East conflict escalated between which countries?**
    Israel and Iran ✅

49. **Philippine satellite for disaster monitoring?**
    Maya-2 ✅

50. **Main PH disaster council is?**
    NDRRMC ✅

🧠 ICCT PSYCHOLOGY MOCK ENTRANCE EXAM (50 ITEMS)

ENGLISH (Items 1–10)

1. Which sentence is written in the active voice?
   A. The letter was written by Maria.
   B. Maria wrote the letter.
   C. The letter is being written.
   D. The letter had been written.

2. Identify the correct subject-verb agreement:
   A. The list of items are long.
   B. The students studies hard.

C. The teacher and the principal is here.
D. The dog and the cat are sleeping.

3. Choose the sentence with correct modifier placement:
   A. She almost drove her kids to school every day.
   B. She drove her kids to school almost every day.
   C. She drove almost her kids to school every day.
   D. She drove her kids almost to school every day.

4. Choose the correct synonym for “elaborate.”
   A. Simple
   B. Complicated
   C. Plain
   D. Easy

5. Which is an example of a complex sentence?
   A. I went to school, and I saw my friends.
   B. I went to school because I had a test.
   C. I went to school; I had a test.
   D. I went to school and saw my friends.

6. “Neither the students nor the teacher ___ present.”
   A. are
   B. were
   C. is
   D. be

7. Choose the antonym of “scarce”:
   A. Limited
   B. Common
   C. Rare
   D. Shortage

8. Which figure of speech is being used? "The wind whispered through the trees."
   A. Metaphor
   B. Simile
   C. Hyperbole

D. Personification

9. Choose the correct word: “She has more friends ___ I do.”
   A. than
   B. then
   C. that
   D. when

10. Identify the part of speech of the underlined word: *She danced* ***gracefully***.
    A. Noun
    B. Verb
    C. Adjective
    D. Adverb

MATHEMATICS (Items 11–20)

11. Solve: 8 + 4 × 2
    A. 24
    B. 20
    C. 16
    D. 12

12. What is 30% of 80?
    A. 24
    B. 26
    C. 28
    D. 30

13. If x = 5, what is the value of $2x^2 - 3$?
    A. 47
    B. 46
    C. 43
    D. 49

14. What is the next number in the pattern: 2, 6, 12, 20, ___?
    A. 28
    B. 30
    C. 32
    D. 34

15. Simplify: (3x + 5) − (2x − 4)
    A. x + 9
    B. x − 9
    C. 5x + 1
    D. x + 1

16. What is the area of a triangle with base = 10 cm and height = 5 cm?
    A. 50 cm²
    B. 25 cm²
    C. 30 cm²
    D. 15 cm²

17. Solve for x: 2x − 6 = 14
    A. 5
    B. 6
    C. 8
    D. 10

18. Convert 0.75 into a fraction.
    A. 3/5
    B. 4/5
    C. 3/4
    D. 2/3

19. Which of the following has the smallest value?
    A. ½
    B. 0.4
    C. 2/3
    D. 1/3

20. What is the mean of: 5, 10, 15, 20, 25?
    A. 12

B. 15
C. 18
D. 20

SCIENCE (Items 21–30)

21. What part of the brain controls balance and coordination?
    A. Cerebrum
    B. Brainstem
    C. Cerebellum
    D. Thalamus

22. What is the powerhouse of the cell?
    A. Nucleus
    B. Ribosome
    C. Mitochondria
    D. Golgi Apparatus

23. Which system transports blood throughout the body?
    A. Respiratory
    B. Circulatory
    C. Nervous
    D. Digestive

24. What organ produces insulin?
    A. Liver
    B. Pancreas
    C. Kidney
    D. Gallbladder

25. Which process produces gametes?
    A. Mitosis
    B. Fertilization
    C. Meiosis

D. Cloning

26. Which layer of the Earth is liquid?
    A. Inner core
    B. Outer core
    C. Mantle
    D. Crust

27. The phase where the moon is fully illuminated:
    A. New moon
    B. First quarter
    C. Full moon
    D. Waning gibbous

28. A physical change is:
    A. Rusting of iron
    B. Burning paper
    C. Melting ice
    D. Baking a cake

29. What is biodiversity?
    A. Only plants in an ecosystem
    B. Climate patterns
    C. Variety of living things
    D. Food chains

30. Global warming is mainly caused by:
    A. Acid rain
    B. Excess oxygen
    C. Carbon dioxide emissions
    D. Volcanoes

LOGICAL REASONING (Items 31–40)

31. Complete the series: A, C, E, G, ___
    A. H
    B. I
    C. J
    D. K

32. 2, 4, 8, 16, ___
    A. 18
    B. 20
    C. 24
    D. 32

33. Choose the odd one out:
    A. Triangle
    B. Circle
    C. Square
    D. Rectangle

34. If all dogs bark and Max is a dog, then Max:
    A. Barks
    B. Runs
    C. Sleeps
    D. Eats

35. Which word doesn’t belong?
    A. Car
    B. Train
    C. Plane
    D. Couch

36. If you face East and turn 270° clockwise, where are you facing?
    A. North
    B. West
    C. South
    D. East

37. Mirror image of “b” is:
    A. b
    B. p
    C. d
    D. q

38. What comes next? 1, 3, 6, 10, 15, ___
    A. 20
    B. 21
    C. 22
    D. 24

39. If all roses are flowers, and some flowers are red, then:
    A. All roses are red
    B. Some flowers are roses
    C. Some roses are not flowers
    D. All flowers are roses

40. Which is the logical conclusion?
    All humans are mortal. Socrates is a human.
    A. Socrates is immortal
    B. Socrates is a philosopher
    C. Socrates is mortal
    D. Socrates is dead

GENERAL KNOWLEDGE (Items 41–50)

41. Who is the current President of the United States (as of 2025)?
    A. Joe Biden
    B. Donald Trump
    C. Kamala Harris
    D. Ron DeSantis

42. What is the capital of Australia?
    A. Sydney

B. Melbourne
C. Brisbane
D. Canberra

43. RA 10029 is known as:
A. The Education Reform Law
B. Psychology Act of 2009
C. Nursing Act
D. Mental Health Law

44. Which country leads ASEAN?
A. Thailand
B. Indonesia
C. Philippines
D. None, it's a joint leadership

45. What is the term for increasing prices of goods over time?
A. Inflation
B. Deflation
C. Recession
D. Taxation

46. Who is known as the "Father of Psychology"?
A. Freud
B. Pavlov
C. Wundt
D. Skinner

47. Which planet is known as the Red Planet?
A. Mars
B. Venus
C. Jupiter
D. Mercury

48. What color is chlorophyll?
A. Red
B. Blue
C. Green

D. Yellow

49. What is the name of the Pope as of 2025?
    A. Pope Benedict XVI
    B. Pope Francis
    C. Pope John Paul II
    D. Pope Leo XIII

50. The human body has how many chromosomes?
    A. 23
    B. 44
    C. 46
    D. 22

✅ ANSWER KEY

English: 1-B, 2-D, 3-B, 4-B, 5-B, 6-C, 7-B, 8-D, 9-A, 10-D
Math: 11-C, 12-A, 13-A, 14-B, 15-A, 16-B, 17-D, 18-C, 19-D, 20-B
Science: 21-C, 22-C, 23-B, 24-B, 25-C, 26-B, 27-C, 28-C, 29-C, 30-C
Logic: 31-C, 32-D, 33-B, 34-A, 35-D, 36-B, 37-C, 38-B, 39-B, 40-C
GK: 41-A, 42-D, 43-B, 44-D, 45-A, 46-C, 47-A, 48-C, 49-B, 50-C

🌟 Sample UPCAT Bonus Exam (Items 1–50)

1. **What is the chemical formula for carbon dioxide?**
2. **Convert 0.25 to a fraction.**
3. **Which is a compound sentence?**
4. **What is the past form of “go”?**
5. **Find the next number: 4, 9, 14, 19, ___**
6. **Identify the synonym of “quick”.**
7. **Which organ stores bile?**
8. **What is the perimeter of a square with side 7 cm?**
9. **Who wrote “Noli Me Tangere”?**

10. Define an oxymoron.

11. What part of speech is “under”?

12. Solve for x: 5x – 3 = 22

13. Which planet is furthest from the sun?

14. What causes tides on Earth?

15. What is the antonym of “scarce”?

16. Who is the father of modern psychology?

17. Define photosynthesis.

18. What is the area of a triangle with base 8 cm and height 6 cm?

19. Plural form of “analysis”?

20. What is the square root of 144?

21. Define prokaryote.

22. Identify the adjective: “A bright star shined.”

23. What is 7 × 8?

24. Convert 3/5 to a percentage.

25. What is Newton’s 1st law also called?

26. What is the capital of Thailand?

27. Change to passive voice: “Teachers praised the student.”

28. Which figure of speech? “He’s a walking dictionary.”

29. What is the formula for the area of a circle?

30. Which Philippine hero was executed in 1896?

31. What gas do living things exhale?

32. What is the tense of “will have finished”?

33. Solve: 15% of 60 = ___

34. What is the largest organ in the human body?

35. What is the value of π to two decimal places?

36. What is an oxbow lake?

37. Who painted the Mona Lisa?

38. Define kinetic energy.

39. What is the boiling point of water in Celsius?

40. What’s the past participle of “eat”?

41. What is the function of ribosomes?

42. Simplify: 6/9 = ___

43. What is the opposite of “artificial”?

44. Which part of the brain controls speech?

45. What is 12^2?

46. Define a haiku.

47. What is the capital of Finland?

48. **Who discovered penicillin?**

49. **What is the main verb in: “They quickly solved the problem”?**

50. **Solve: 8 + (12 ÷ 4) × 3**

🧾 Answer Key

1. **CO_2**
2. **¼**
3. **e.g., “I came, and I saw.”**
4. **went**
5. **24 (add 5)**
6. **fast**
7. **gallbladder**
8. **28 cm**
9. **José Rizal**
10. **A contradictory phrase (e.g., “deafening silence”)**
11. **preposition**
12. **x = 5**
13. **Neptune**
14. **gravitational pull of Moon/Sun**

15. abundant

16. Wilhelm Wundt

17. Conversion of light energy into chemical energy in plants

18. 24 cm^2

19. analyses

20. 12

21. organism without a nucleus (e.g., bacteria)

22. bright

23. 56

24. 60%

25. Law of Inertia

26. Bangkok

27. The student was praised by teachers.

28. metaphor

29. πr^2

30. Andres Bonifacio

31. carbon dioxide

32. future perfect

33. 9

34. skin

35. 3.14

36. a U-shaped lake formed from a cut-off river meander

37. Leonardo da Vinci

38. energy due to motion (½mv²)

39. 100 °C

40. eaten

41. protein synthesis

42. 2/3

43. natural

44. Broca’s area (in frontal lobe)

45. 144

46. a three-line Japanese poem (5–7–5 syllables)

47. Helsinki

48. Alexander Fleming

49. solved

50. 8 + (3 × 3) = 17

📚 Study Habits & Time Management

Tips to Maximize Learning Efficiency:

- 🕑 **Use Pomodoro Technique: 25 mins focused study + 5 min break.**
- 🎯 **Set Daily Goals: Clear targets for each subject/topic.**
- 📝 **Use Checklists: Cross off completed topics to feel progress.**
- 🧠 **Mix it up: Study multiple subjects per day to avoid burnout.**
- 📵 **Minimize Distractions: Airplane mode on phone during sessions.**

🛡️ Exam Day Survival Guide

- 📅 **Prepare Everything the Night Before: Pencil, ID, water, snacks.**
- 🧘 **Sleep at least 6–8 hours — your brain needs to be fresh.**
- 🍌 **Eat light but energizing food: Think banana + peanut butter.**
- ⏰ **Arrive early to avoid panic.**
- 💨 **Breathe in 4–4–4 pattern (inhale-hold-exhale) to calm nerves.**

🧘 How to Stay Calm Before & During the Test

- 🙏 **Pray.**
- 💭 **Positive Visualization: Imagine succeeding.**
- 🎶 **Bring calming music or do a 5-minute meditation before entering.**
- 🫁 **Breathe. If your heart races, pause and take slow, deep breaths.**
- 😌 **Tell yourself: “I’m prepared. I’ve studied. I’ve got this.”**

💬 **Daily Affirmations for Students**

- **“I am capable of learning difficult things.”**
- **“I trust in my preparation and remain calm.”**
- **“Every day, I am getting closer to my goal.”**
- **“God is with me. I will not fear.”**
- **“I am destined for greatness, and I work hard for it.”**

📖 **Bible Verses for Strength, Wisdom & Exam Peace**

Isaiah 41:10
"So do not fear, for I am with you; do not be dismayed, for I am your God. I will strengthen you and help you; I will uphold you with my righteous right hand."

🪨 ***When anxiety hits or you feel unworthy, this verse is your steady anchor.***

Proverbs 16:3
"Commit to the Lord whatever you do, and He will establish your plans."

🎯 ***Before you open your reviewer or take your exam, commit it all to Him.***

Psalm 28:7
"The Lord is my strength and my shield; my heart trusts in Him, and He helps me."

🛡️ ***If you feel like you're carrying it all alone—this reminds you you're not.***

---

2 Timothy 1:7
"For God has not given us a spirit of fear, but of power and of love and of a sound mind."

🧠 *Perfect for test-takers who need calm and clarity under pressure.*

Psalm 119:105
"Your word is a lamp to my feet and a light to my path."

🔦 *When you're unsure about your future or decisions, His Word will guide you.*

Romans 8:28
"And we know that in all things God works for the good of those who love Him..."

🔄 *Even delays, rejections, or detours—God still works it all for your best.*

Matthew 6:33
"But seek first His kingdom and His righteousness, and all these things will be given to you as well."

👑 *If you're overwhelmed with goals, remind yourself to seek Him first—He handles the rest.*

Jeremiah 29:11
"'For I know the plans I have for you,' declares the Lord, 'plans to prosper you and not to harm you, plans to give you hope and a future.'"

🌱 *The ultimate reminder that God is setting you up for something great.*

Ecclesiastes 3:1
"There is a time for everything, and a season for every activity under the heavens."

⏳ ***Rest when needed. Hustle when ready. Every season has a purpose.***

Psalm 46:1
"God is our refuge and strength, an ever-present help in trouble."

🛖 ***During those mental breakdown nights or test panic—He's just one prayer away.***

🗓️ **Sample Study Schedule (1 Week Before Exam) - Pang Normal na tao**

Time	Task
8:00–9:30 AM	Math Review (Fractions, Algebra)
10:00–11:00 AM	English Grammar & Reading
1:00–2:30 PM	Science (Biology/Genetics)
3:00–4:00 PM	General Info / Current Events
7:00–8:30 PM	Logic & Abstract Practice
9:00 PM	Affirmation + Bible Verse + Sleep

SAMPLE STUDY SCHEDULE NG MGA TAGA ENCANTADIA

📍 ***Night shift: 11:00 PM – 7:30 AM***
📍 ***Study time: Before or after shift***

Time	Task
7:45–8:15 AM	**Light breakfast + decompress from work (Wag muna agad review, girl. Brain cells mo need reboot.)**
8:30–9:30 AM	**🧠 *Science Focus* (Anatomy, Genetics, Life Science – habang sariwa pa utak mo from work)**

9:30–10:00 AM	🙏 ***Prayer + Bible Verse + Affirmation*** **(*"I am called. I am chosen. I will pass this entrance exam in Jesus' Name."*)**
10:00 AM–5:00 PM	💤 ***SACRED TULOG PARA SA MGA BANAL NA ALON NG CALL CENTER LIFE***
5:30–6:30 PM	📘 ***Math Madness*** **(Fractions, Ratios, Algebra – habang mainit pa ang pandesal ng isipan)**
6:30–7:00 PM	🍽️ **Dinner / Merienda with CJ or Meg (para kilig at sustansya)**
7:00–8:00 PM	✏️ ***Filipino + Gen Info*** **(Araling Panlipunan, Constitution, Current Events – light lang para hindi antukin)**
8:00–9:00 PM	🧠 ***Logic & Abstract Practice*** **(paikot-ikot na triangles at pattern ng mga alien)**
9:00–10:30 PM	🪷 ***English Deep Dive*** **(Grammar, Reading, Comprehension) – Chill before shift.**
10:30–11:00 PM	☕ **Prepare for Shift: Devotion, Affirmation, Stretch, Breathe. Lakad na sa Encantadia HQ. ✨💼**

💡 **Notes para sa mga Encantadians:**

- ❗ ***Don’t push yourself on low-energy days. Shift your review to post-shift or alternate days.***
- 💧 **Stay hydrated lalo na kung kape ang bestie mo.**
- 📱 **Use flashcards or voice notes while brushing teeth or commuting (maximize micro-moments).**
- 😴 **Try at least one full rest day to recharge your soul, not just your body.**

50 Essential Formulas & Mnemonics for Exam Prep

1. Planets Order Mnemonic
My Very Educated Mother Just Served Us Nachos
(Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune)

2. Taxonomic Ranks
King Philip Came Over For Good Spaghetti
(Kingdom, Phylum, Class, Order, Family, Genus, Species)

3. Photosynthesis Formula
$6CO_2 + 6H_2O + \text{sunlight} \rightarrow C_6H_{12}O_6 + 6O_2$

(Carbon dioxide + water + sunlight → glucose + oxygen)

NEWTON'S LAWS OF MOTION (Simple memory aid)

1. **Law 1 (Inertia):**
   "Objects keep chillin' unless you push 'em."
   (An object at rest stays at rest, in motion stays in motion unless acted upon by a force.)

2. **Law 2 (F=ma):**
   Force = mass × acceleration
   (The harder you push, the faster it goes—proportional to mass.)

3. **Law 3 (Action-Reaction):**
   "For every action, there's an equal and opposite reaction."
   (Push the wall, it pushes you back.)

5. Boyle's Law

$P_1V_1 = P_2V_2$ (Pressure × Volume = constant at constant temp)

6. Quadratic Formula

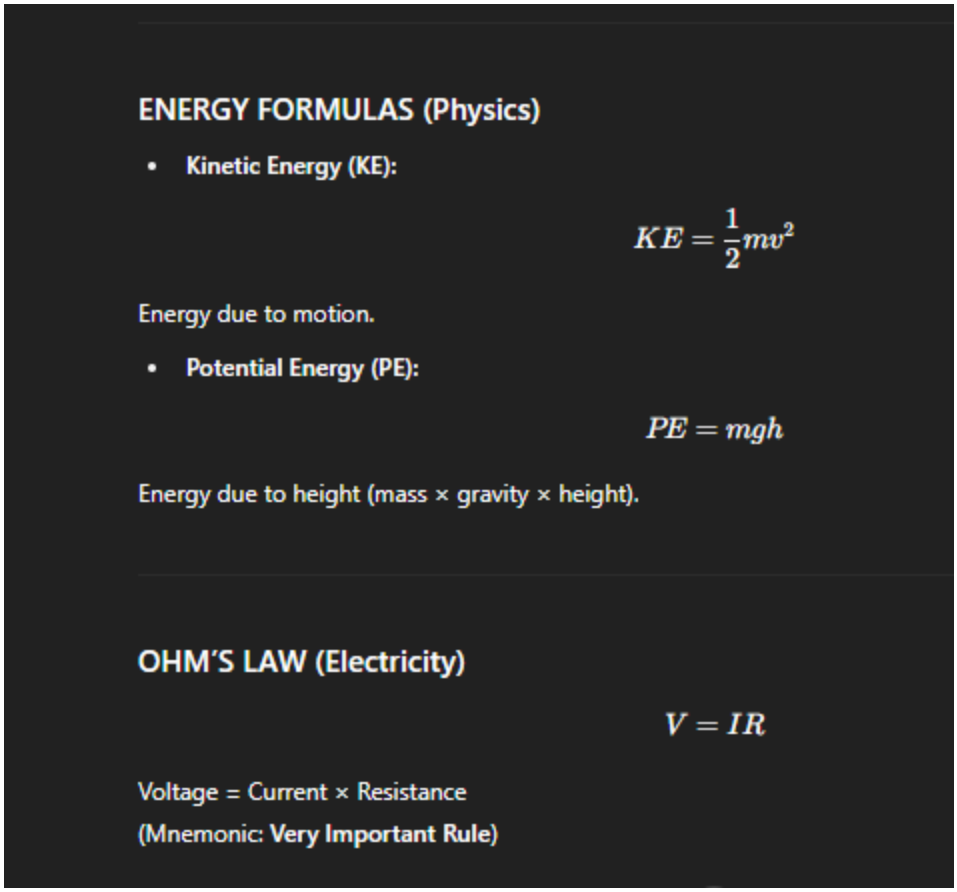
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

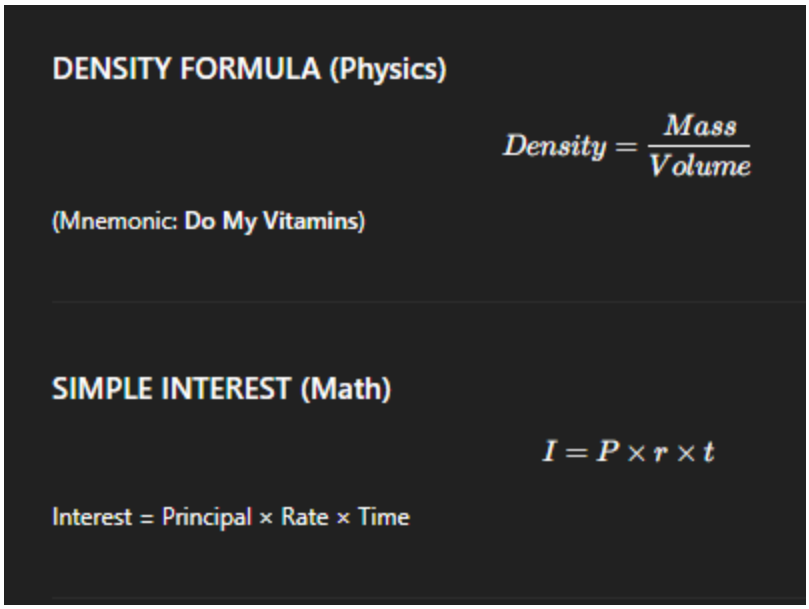
Mnemonic:
"Minus boy plus or minus, square root of boy squared minus four a c, all over two a"

7. IDEAL GAS LAW (Chemistry)

PV=nRTPV = nRTPV=nRT

Pressure × Volume = Moles × Gas Constant × Temperature
(Mnemonic: “Pretty Vacant Nights Reach Temples”)




DENSITY FORMULA (Physics)
$Density = \frac{Mass}{Volume}$
(Mnemonic: Do My Vitamins)
SIMPLE INTEREST (Math)
$I = P \times r \times t$
Interest = Principal × Rate × Time

13. Law of Conservation of Mass
Mass of Reactants = Mass of Products

14. PH Scale Mnemonic
0–6 Acid, 7 Neutral, 8–14 Base
"0 to 6 Acid Tricks, 7's Heaven, 8 to 14 Base Scene"

15. Human Blood Flow Mnemonic
VA-PA-Lungs (Right) / PV-LA-LV-Aorta (Left)
(Vena Cava → RA → RV → Pulmonary Artery → Lungs)
(Pulmonary Vein → LA → LV → Aorta)

16. Law of Reflection
Angle of incidence = Angle of reflection

17. Speed Formula
Speed = Distance / Time

18. Acceleration
a = (final velocity - initial velocity) / time

19. Work Formula
Work = Force × Distance

20. Power
Power = Work / Time

21. Pressure Formula
Pressure = Force / Area

22. Hooke's Law (Spring Force)
F = kx

23. Wave Speed Formula
v = f × λ (frequency × wavelength)

24. Concentration Formula
Concentration = amount of solute / volume of solution

25. Molarity
M = moles of solute / liters of solution

26. Boyle's Law Mnemonic
"Boyle Packs Volume Pressure"

27. Newton's 1st Law
An object stays at rest or in motion unless acted upon by force

28. Newton's 3rd Law
For every action, there is an equal and opposite reaction

29. Chemical Reaction Rate Factors
Temperature, concentration, surface area, catalysts

30. Photosynthesis Mnemonic
$6\ CO_2 + 6\ H_2O + \text{sunlight} \rightarrow \text{Glucose} + 6\ O_2$

31. Order of Operations (PEMDAS)
Parentheses, Exponents, Multiplication, Division, Addition, Subtraction

32. Pythagorean Theorem
$a^2 + b^2 = c^2$

33. Area of a Triangle
Area = ½ × base × height

34. Circumference of Circle
$C = 2\pi r$

35. Area of Circle
$A = \pi r^2$

36. Volume of Cylinder
$V = \pi r^2 h$

37. Volume of Sphere
$V = (4/3)\pi r^3$

38. Probability Formula
P = favorable outcomes / total outcomes

39. Percent Formula
Percent = (part / whole) × 100

40. Distance Formula (Coordinate Geometry)
$d = \sqrt{[(x_2 - x_1)^2 + (y_2 - y_1)^2]}$

41. Slope Formula
$m = (y_2 - y_1) / (x_2 - x_1)$

42. Midpoint Formula
$M = ((x_1 + x_2)/2, (y_1 + y_2)/2)$

43. Exponential Growth Formula
$N = N_0e^{(rt)}$

44. Logarithm Definition
If ab=ca^b = cab=c, then logac=b\log_a c = blogac=b

45. Cell Theory Basics
All living things are made of cells; cells come from other cells

46. Mendel's Law of Segregation
Alleles separate during gamete formation

47. DNA Base Pairing Rule
A-T, C-G (Adenine-Thymine, Cytosine-Guanine)

48. Scientific Method Steps
Ask, Research, Hypothesis, Experiment, Analyze, Conclude, Report

49. Human Body Systems Mnemonic
"CRINED" = Circulatory, Respiratory, Integumentary, Nervous, Endocrine, Digestive

50. Order of Operations in Science Experiments
Identify variables, control, collect data, analyze, conclude

—--

🧠 **50-Item BLEPP-Style Mock Exam**

✅ **Answers with explanations included after every item.**

PART 1: Developmental, Cognitive, and Personality Psychology (1–10)

1. **The stage in Erikson's psychosocial development that involves "trust vs. mistrust" occurs at what age?**
   A. 0–1 year ✅
   ➡️ ***Explanation: This is the infancy stage where the child learns to trust caregivers to meet basic needs. If not, mistrust develops.***

2. **According to Freud, the anal stage focuses on:**
   B. Toilet training ✅
   ➡️ ***Explanation: Freud's anal stage (1–3 years) is centered around toilet training and control over bodily functions.***

3. **Piaget's Concrete Operational Stage occurs at what age range?**
   C. 7–11 years ✅
   ➡️ ***Explanation: At this stage, children begin to think logically about concrete events but struggle with abstract concepts.***

4. **Vygotsky's Zone of Proximal Development refers to:**
   B. The area between what a learner can do alone and with help ✅
   ➡️ ***Explanation: ZPD is the gap between independent performance and what the child can do with guidance.***

5. **In Kohlberg's moral development, obeying rules to avoid punishment falls under:**
   B. Pre-conventional ✅
   ➡️ ***Explanation: The pre-conventional level focuses on self-interest, including avoiding punishment and gaining rewards.***

6. **The "initiative vs. guilt" stage in Erikson's theory happens during:**
   B. 3–5 years ✅
   ➡️ ***Explanation: Children begin asserting power and control through directing play and social interaction.***

7. **Who proposed the eight stages of psychosocial development?**
   B. Erik Erikson ✅
   ➡️ ***Explanation: Erikson developed the eight-stage model addressing psychological crises across the lifespan.***

8. **According to Bandura, learning occurs through:**
   B. Modeling and observation ✅
   ➡️ ***Explanation: Bandura's Social Learning Theory emphasizes learning by observing others (e.g., Bobo doll experiment).***

9. **Which theorist emphasized the influence of culture and language on cognitive development?**
   C. Vygotsky ✅
   ➡️ ***Explanation: Vygotsky believed that social interaction and language are key in cognitive development.***

10. **A person who is angry at work and yells at family is using which defense mechanism?**
    C. Displacement ✅
    ➡️ ***Explanation: Displacement involves shifting emotional responses from the original source to a safer substitute.***

PART 2: Biological Psychology, Brain, and Intelligence (11–20)

11. **What is the function of Broca's area?**
    C. Speech production ✅
    ➡️ ***Explanation: Located in the frontal lobe, Broca's area is crucial for producing spoken language.***

12. **Damage to the hippocampus mainly affects:**
    B. Memory ✅
    ➡️ ***Explanation: The hippocampus is involved in the formation of new long-term memories.***

13. **IQ range for "average intelligence" is:**
    B. 90–110 ✅
    ➡️ ***Explanation: This is the standard average range on most IQ tests such as the WAIS.***

14. **The occipital lobe primarily processes:**
    A. Vision ✅
    ➡️ ***Explanation: The occipital lobe, located at the back of the brain, is responsible for visual processing.***

15. **Which neurotransmitter is most linked to mood regulation?**
    C. Serotonin ✅
    ➡️ ***Explanation: Low levels of serotonin are associated with depression and mood disorders.***

16. **The sympathetic nervous system prepares the body for:**
    B. Fight-or-flight ✅

➡️ ***Explanation: It activates bodily responses to stress like increased heart rate and blood pressure.***

17. **Which test measures intelligence?**
    C. WAIS ✅
    ➡️ ***Explanation: The Wechsler Adult Intelligence Scale (WAIS) is a common standardized IQ test.***

18. **The left hemisphere of the brain is primarily associated with:**
    B. Language and logic ✅
    ➡️ ***Explanation: The left hemisphere processes analytical, logical, and language-related tasks.***

19. **An fMRI is used to:**
    B. Study blood flow and brain activity ✅
    ➡️ ***Explanation: Functional MRI tracks changes in blood flow to measure brain activity in real time.***

20. **Which brain part is involved in fear and aggression?**
    D. Amygdala ✅
    ➡️ ***Explanation: The amygdala processes emotions like fear, threat detection, and aggression***

🧠 **BLEPP-Style Mock Exam (Cont'd)**

📚 **Items 21–50 with answers and explanations**

PART 3: Abnormal Psychology & Psychological Disorders (21–30)

21. **Which disorder is characterized by persistent sadness and loss of interest?**
    A. Major Depressive Disorder ✅

➡️ ***Explanation: MDD includes low mood, anhedonia, and cognitive/physical symptoms lasting at least 2 weeks.***

22. Excessive worry occurring more days than not for 6 months defines:
B. Generalized Anxiety Disorder (GAD) ✅
➡️ ***Explanation: GAD involves chronic and uncontrollable worry across various domains.***

23. Delusions and hallucinations are most common in:
C. Schizophrenia ✅
➡️ ***Explanation: Schizophrenia features psychosis, including auditory hallucinations and bizarre beliefs.***

24. Fear of social judgment or embarrassment is seen in:
D. Social Anxiety Disorder ✅
➡️ ***Explanation: Individuals avoid social situations due to fear of scrutiny and embarrassment.***

25. A disorder involving alternating highs (mania) and lows (depression) is called:
C. Bipolar Disorder ✅
➡️ ***Explanation: Bipolar involves mood shifts from elevated (manic/hypomanic) to depressive states.***

26. Which disorder is often triggered by a traumatic event?
B. PTSD ✅
➡️ ***Explanation: Post-Traumatic Stress Disorder includes flashbacks, hyperarousal, and avoidance behaviors.***

27. Compulsions in OCD are defined as:
C. Repetitive behaviors performed to reduce anxiety ✅
➡️ ***Explanation: They are ritualistic actions meant to prevent a feared outcome, often irrational.***

28. Which eating disorder involves binge eating and purging?
B. Bulimia Nervosa ✅
➡️ ***Explanation: Bulimia features episodes of overeating followed by***

compensatory behaviors like vomiting.

29. **Antisocial Personality Disorder involves:**
A. Lack of remorse, deceitfulness, disregard for rules ✅
➡️ ***Explanation: This personality disorder often includes manipulative behavior and criminal tendencies.***

30. **Which therapy focuses on identifying and restructuring distorted thoughts?**
C. Cognitive Behavioral Therapy (CBT) ✅
➡️ ***Explanation: CBT targets faulty thinking patterns that influence behavior and emotions.***

PART 4: Learning, Conditioning & Research (31–40)

31. **In classical conditioning, a neutral stimulus becomes:**
B. A conditioned stimulus ✅
➡️ ***Explanation: The formerly neutral stimulus elicits a response after being paired with the unconditioned stimulus.***

32. **The "Little Albert" experiment demonstrated:**
D. Fear can be conditioned ✅
➡️ ***Explanation: Watson showed that emotional responses like fear could be classically conditioned.***

33. **In operant conditioning, a reward that increases behavior is called:**
A. Positive reinforcement ✅
➡️ ***Explanation: It introduces a pleasant stimulus to encourage repetition of the behavior.***

34. **Removing an aversive stimulus to increase behavior is:**
B. Negative reinforcement ✅
➡️ ***Explanation: Example – buckling a seatbelt to stop car alarm; the removal of an annoyance increases behavior.***

35. **Skinner is most associated with which type of learning?**
C. Operant conditioning ✅
➡️ ***Explanation: B.F. Skinner emphasized learning through reinforcement and punishment.***

36. **The dependent variable in an experiment is:**
D. The outcome that is measured ✅
➡️ ***Explanation: It's what researchers observe for changes based on manipulated variables.***

37. **Which type of research establishes cause-effect relationships?**
A. Experimental ✅
➡️ ***Explanation: Experiments manipulate variables and control for bias to determine causality.***

38. **A correlation coefficient of -0.87 indicates:**
C. A strong negative relationship ✅
➡️ ***Explanation: Closer to -1 means a strong inverse relationship between variables.***

39. **Informed consent means:**
B. Participants are fully aware of procedures and risks ✅
➡️ ***Explanation: Ethical principle ensuring voluntary, knowledgeable participation.***

40. **Which is NOT part of the scientific method?**
D. Ignoring outliers ✅
➡️ ***Explanation: Outliers must be analyzed — not ignored — as they can influence results.***

PART 5: Testing, Assessment, and Ethics (41–50)

41. **Standardized tests must be:**
C. Reliable and valid ✅
➡️ ***Explanation: Reliability = consistency; Validity = accuracy in measuring***

what it's intended to.

42. What is the average IQ score?

B. 100 ✅

➡️ ***Explanation: Standardized IQ tests use a bell curve where the mean (average) is 100.***

43. A projective test example is:

D. Rorschach Inkblot Test ✅

➡️ ***Explanation: Projective tests reveal unconscious aspects by interpreting ambiguous stimuli.***

44. The MMPI is used to assess:

A. Personality disorders and traits ✅

➡️ ***Explanation: It helps diagnose psychopathologies and assess mental functioning.***

45. Confidentiality in therapy means:

C. Information shared will not be disclosed without consent ✅

➡️ ***Explanation: A fundamental ethical principle unless danger to self/others is present.***

46. Test-retest reliability checks for:

B. Stability of scores over time ✅

➡️ ***Explanation: Same test given twice to see if results are consistent.***

47. Which law regulates psychological services in the Philippines?

C. RA 10029 ✅

➡️ ***Explanation: Also called the Psychology Act of 2009, governs practice and licensure.***

48. Which test is designed to measure potential rather than achievement?

A. Aptitude test ✅

➡️ ***Explanation: Aptitude tests assess ability to learn or develop skills in the future.***

49. Which ethical principle means “do no harm”?

C. Nonmaleficence ✅

➡️ ***Explanation: Psychologists must avoid actions that can harm clients emotionally or physically.***

50. In a normal distribution, what % of scores fall within 1 SD from the mean?
B. 68% ✅
➡️ ***Explanation: This is the empirical rule — 68% within ±1 SD in a normal curve.***

🧠 **NMAT MOCK EXAM – Sample (1–16) (Para sa mga aspiring doctors na wala pang nasisimulan :D)**

🟣 **Verbal**

1. **Happy is to Joy as Sad is to _____**
   A. Cry B. Tears C. Sorrow D. Rain
   ✅ Answer: C. Sorrow

2. **Which of the following is a synonym of *elated*?**
   A. Depressed B. Joyful C. Angry D. Tired
   ✅ Answer: B. Joyful

🔢 **Quantitative**

3. What is the next number in the sequence: 2, 4, 8, 16, ?
A. 18 B. 24 C. 32 D. 36
✅ Answer: C. 32
📝 ***Explanation: Doubling pattern (+2, ×2).***

4. **Solve for x: 2x + 3 = 11**
   A. 4 B. 5 C. 6 D. 7
   ✅ Answer: A. 4

🔲 **Perceptual Acuity**

5. Which figure is the mirror image of the given one?

A. A B. B C. C D. D
✅ Answer: B

6. Find the hidden figure from the options.
   A. W B. X C. Y D. Z
   ✅ Answer: B. X

🔍 Inductive Reasoning
7. All cats have fur. This animal has fur. Therefore, it is a cat.
A. Valid B. Invalid C. Sound D. Strong
✅ Answer: B. Invalid

8. If all men are mortal and Socrates is a man, then Socrates is mortal.
   A. Inductive B. Deductive C. Abductive D. Retroductive
   ✅ Answer: B. Deductive

🧬 Biology
9. Which organelle is known as the powerhouse of the cell?
A. Nucleus B. Ribosome C. Mitochondria D. Chloroplast
✅ Answer: C. Mitochondria

10. Which of these carries oxygen in the blood?
    A. White blood cells B. Red blood cells C. Platelets D. Plasma
    ✅ Answer: B. Red blood cells

⚛️ Physics
11. What is the formula for force?

A. F = ma B. F = mv C. F = m/g D. F = v/t
✅ Answer: A. F = ma

12. Which law states that for every action, there is an equal and opposite reaction?
A. Newton's 1st B. Newton's 2nd C. Newton's 3rd D. Law of Gravitation
✅ Answer: C. Newton's 3rd

📚 Social Science
13. Who is known as the father of psychoanalysis?
A. Skinner B. Freud C. Piaget D. Erikson
✅ Answer: B. Freud

14. Which of these is NOT a stage in Erikson's theory of development?
A. Trust vs. Mistrust B. Initiative vs. Guilt C. Ego vs. Id D. Industry vs. Inferiority
✅ Answer: C. Ego vs. Id

🧪 Chemistry
15. What is the chemical symbol for Sodium?
A. Na B. So C. Sn D. N
✅ Answer: A. Na

16. Which gas is released during photosynthesis?
A. Oxygen B. Carbon dioxide C. Hydrogen D. Nitrogen
✅ Answer: A. Oxygen

🧠 NMAT Mock Exam (17–50)

17. What is the function of the *ribosome*?
A. DNA replication
B. Protein synthesis
C. Lipid storage
D. ATP production
✅ B – Ribosomes assemble proteins.

18. Convert 0.125 to a fraction.
A. 1/8
B. 1/4
C. 5/8
D. 1/2
✅ A – 0.125 = 1/8.

19. Which sentence is compound?
A. “She ran.”
B. “She ran and jumped.”
C. “Because she ran, she was tired.”
D. “Running was fun.”
✅ B – Two independent clauses joined by a conjunction.

20. Which organ system regulates temperature and water balance?
A. Nervous
B. Endocrine
C. Integumentary
D. Circulatory
✅ C – Skin system controls these functions.

21. What is 15% of 200?
A. 25
B. 30
C. 35
D. 40
✅ B – (15/100) * 200 = 30.

22. Who discovered gravity after observing an apple fall?
A. Einstein

B. Newton
C. Galileo
D. Kepler
✅ B – Sir Isaac Newton.

23. What is the study of human behavior and mental processes?
A. Sociology
B. Psychology
C. Biology
D. Anthropology
✅ B – Definition of psychology.

24. What gas do plants absorb?
A. Oxygen
B. Nitrogen
C. Carbon dioxide
D. Methane
✅ C – CO_2 is used in photosynthesis.

25. How many valence electrons does oxygen have?
A. 4
B. 6
C. 8
D. 2
✅ B – Oxygen has six valence electrons (atomic number 8).

26. A Shakespearean sonnet has how many lines?
A. 10
B. 12
C. 14
D. 16
✅ C – Classic sonnet contains 14 lines.

27. What is the perimeter of a rectangle with sides 5 and 10?
A. 15
B. 30
C. 50

D. 100
✅ B – P = 2(l + w) = 2(5+10) = 30.

28. Which dynasty built the Great Wall?
A. Ming
B. Qin
C. Han
D. Tang
✅ A – Major construction during Ming dynasty.

29. The condition $P_1/T_1 = P_2/T_2$ describes:
A. Charles' Law
B. Boyle's Law
C. Gay-Lussac's Law
D. Ideal Gas Law
✅ C – Pressure directly proportional to temperature at constant volume.

30. Which figure is the hidden match to the base shape?
A. A
B. B
C. C
D. D
✅ C – Visual matching answer.

31. Which of the following is a primary immune cell?
A. Neuron
B. Macrophage
C. Epithelial cell
D. Myocyte
✅ B – Macrophages fight infection.

32. What's the indefinite article before a noun starting with a vowel sound?
A. A
B. An
C. The
D. None
✅ B – Use "an" before vowel sounds.

33. What's the equivalent fraction of 3/4 as a percent?
A. 50%
B. 60%
C. 75%
D. 80%
✅ C – 0.75 = 75%.

34. Which of these pairs are antonyms?
A. Big – Large
B. Happy – Joyful
C. Ancient – Modern
D. Small – Tiny
✅ C – Ancient vs. Modern are opposites.

35. The smallest unit of life is the:
A. Atom
B. Molecule
C. Cell
D. Organ
✅ C – Cell is the basic unit of life.

36. Which chemical binds oxygen in red blood cells?
A. Chlorophyll
B. Hemoglobin
C. Myosin
D. Keratin
✅ B – Hemoglobin = O_2 transporter.

37. Which angle type sums to 90°?
A. Complementary
B. Supplementary
C. Vertical
D. Reflex
✅ A – Complementary angles.

38. What is the capital of Japan?
A. Seoul
B. Beijing

C. Tokyo
D. Bangkok
✅ C – Tokyo is correct.

39. In grammar, the subject of a passive sentence becomes:
A. Agent
B. Object
C. Complement
D. Subject
✅ B – Passive turns subject into object.

40. Which planet is known as the Red Planet?
A. Venus
B. Mars
C. Jupiter
D. Saturn
✅ B – Mars is the Red Planet.

41. What is the freezing point of water in Fahrenheit?
A. 0°F
B. 32°F
C. 100°F
D. 212°F
✅ B – Freezing point = 32°F.

42. A syllogism: All men are mortal. Socrates is a man. Therefore, Socrates is mortal. This is:
A. Inductive
B. Deductive
C. Invalid
D. Empirical
✅ B – Classic deductive argument.

43. What is 9 × 9?
A. 72
B. 81
C. 90

D. 99
✅ B – 9 × 9 = 81.

44. Which war ended in 1945?
A. WWI
B. WWII
C. Korean War
D. Vietnam War
✅ B – WWII ended in 1945.

45. What is CH_3COOH commonly known as?
A. Ethanol
B. Acetic acid
C. Methane
D. Sulfuric acid
✅ B – Acetic acid = vinegar.

46. The word “benevolent” means:
A. Kind
B. Cruel
C. Tired
D. Excited
✅ A – Benevolent = kind-hearted.

47. Which cell phase involves nuclear division?
A. Interphase
B. Mitosis
C. G_1
D. S phase
✅ B – Mitosis divides nucleus.

48. Who coined the term “classical conditioning”?
A. Skinner
B. Watson
C. Pavlov
D. Thorndike
✅ C – Pavlov = classical conditioning.

49. Light bends when moving between media due to:
A. Reflection
B. Refraction
C. Diffraction
D. Absorption
✅ B – Refraction = bending of light.

50. What mental disorder is characterized by alternating manic and depressive episodes?
A. Schizophrenia
B. Depression
C. OCD
D. Bipolar Disorder
✅ D – Defined by mood swings.

🧠 NMAT-Style Mock Exam – Part 2 (Items 51–100)

51. What organelle is responsible for digesting cellular waste?
A. Ribosome
B. Lysosome
C. Golgi Apparatus
D. Vacuole

52. Which of the following is a reducing sugar?
A. Sucrose
B. Glucose

C. Cellulose
D. Starch

53. In genetics, what does "homozygous" mean?
A. Different alleles
B. Two dominant alleles
C. Identical alleles
D. Mutated alleles

54. The acceleration due to gravity on Earth is approximately:
A. 3.2 m/s^2
B. 9.8 m/s^2
C. 12.6 m/s^2
D. 1.6 m/s^2

55. Which gas law describes the inverse relationship between pressure and volume?
A. Charles' Law
B. Boyle's Law
C. Avogadro's Law
D. Dalton's Law

56. The part of the brain that coordinates voluntary movement:
A. Cerebrum
B. Brainstem
C. Cerebellum
D. Thalamus

57. The SI unit of electric current is:
A. Ohm
B. Volt
C. Ampere
D. Watt

58. What is the boiling point of water at sea level?
A. 90°C
B. 98°C

C. 100°C
D. 110°C

59. Which vitamin is essential for blood clotting?
A. Vitamin A
B. Vitamin D
C. Vitamin K
D. Vitamin C

60. What part of the cell cycle does DNA replicate?
A. G1 phase
B. S phase
C. G2 phase
D. M phase

61. Which is a function of the hypothalamus?
A. Memory formation
B. Voluntary muscle movement
C. Body temperature regulation
D. Speech coordination

62. The molecule responsible for carrying oxygen in the blood:
A. Myoglobin
B. Hemoglobin
C. Insulin
D. ATP

63. In a neutral atom, the number of electrons equals the number of:
A. Protons
B. Neutrons
C. Valence electrons
D. Nucleons

64. Which of the following is not a noble gas?
A. Helium
B. Neon

C. Chlorine
D. Argon

65. The most abundant element in the human body:
A. Calcium
B. Hydrogen
C. Oxygen
D. Carbon

66. What is Newton's Second Law?
A. For every action, there is an equal and opposite reaction.
B. Force equals mass times acceleration.
C. Objects in motion stay in motion.
D. Gravity acts at a distance.

67. The hormone responsible for regulating metabolism:
A. Insulin
B. Thyroxine
C. Cortisol
D. Testosterone

68. What is the product of anaerobic respiration in muscles?
A. Ethanol
B. Oxygen
C. Lactic acid
D. Water

69. Which macronutrient provides the most energy per gram?
A. Carbohydrates
B. Proteins
C. Fats
D. Fiber

70. The part of a neuron that receives signals:
A. Axon
B. Soma

C. Dendrite
D. Node of Ranvier

71. The atomic number of an element refers to the number of:
A. Protons
B. Neutrons
C. Electrons
D. Valence electrons

72. Which psychologist is known for the Hierarchy of Needs?
A. Freud
B. Maslow
C. Skinner
D. Pavlov

73. Which blood type is a universal donor?
A. AB+
B. AB–
C. O+
D. O–

74. A 500g object is accelerated at 4 m/s^2. What is the force applied?
A. 2N
B. 4N
C. 2000N
D. 2N

75. What is the function of the pancreas?
A. Produces bile
B. Filters blood
C. Produces insulin
D. Absorbs nutrients

76. In classical conditioning, the unconditioned stimulus causes:
A. A neutral response
B. A conditioned response

C. A reflex
D. Confusion

77. Which of the following is a primary source?
A. Textbook
B. Encyclopedia
C. Diary
D. Biography

78. Which structure pumps blood to the lungs?
A. Left ventricle
B. Right ventricle
C. Right atrium
D. Left atrium

79. The rate of change in velocity is:
A. Speed
B. Force
C. Acceleration
D. Work

80. Which organ removes carbon dioxide from the body?
A. Liver
B. Skin
C. Kidneys
D. Lungs

81. The main pigment in photosynthesis:
A. Carotene
B. Xanthophyll
C. Chlorophyll
D. Anthocyanin

82. How many chromosomes are in human body cells?
A. 23
B. 46

C. 44
D. 22

83. Which part of the digestive system absorbs nutrients?
A. Stomach
B. Large intestine
C. Small intestine
D. Esophagus

84. What is the primary role of ribosomes?
A. Transport nutrients
B. Protein synthesis
C. Digest fats
D. Store energy

85. Which term means “self-eating” in cells?
A. Phagocytosis
B. Autophagy
C. Endocytosis
D. Apoptosis

86. What is the chemical formula of methane?
A. CO_2
B. CH_4
C. C_2H_6
D. $C_6H_{12}O_6$

87. What does DNA stand for?
A. Deoxyribonucleic acid
B. Dideoxynucleic acid
C. Deoxyribose nucleic acid
D. Dicarboxylic nucleic acid

88. A solution with pH 3 is:
A. Neutral
B. Weak base

C. Strong acid
D. Weak acid

89. The fluid part of blood is called:
A. Serum
B. Plasma
C. Hemoglobin
D. Platelets

90. Which planet has the strongest gravity?
A. Jupiter
B. Earth
C. Saturn
D. Neptune

91. Which law explains why we wear seatbelts?
A. Newton’s 1st
B. Newton’s 2nd
C. Newton’s 3rd
D. Bernoulli’s

92. What’s the formula for kinetic energy?
A. KE = mv
B. KE = ½mv²
C. KE = mgh
D. KE = Fd

93. The powerhouse of the cell is:
A. Golgi
B. Mitochondria
C. Nucleus
D. ER

94. In population growth, "carrying capacity" refers to:
A. Number of births
B. Death rate

C. Max population the environment can sustain
D. Immigration level

95. One mole of a substance contains:
A. 3.14×10^{23} particles
B. 6.02×10^{23} particles
C. 9.81×10^{23} particles
D. 1.01×10^{23} particles

96. Blood flows from the lungs to the heart via:
A. Pulmonary artery
B. Aorta
C. Pulmonary vein
D. Vena cava

97. Who discovered penicillin?
A. Watson
B. Mendel
C. Alexander Fleming
D. Darwin

98. What kind of bond involves shared electrons?
A. Ionic
B. Hydrogen
C. Covalent
D. Metallic

99. Which vitamin prevents scurvy?
A. Vitamin A
B. Vitamin C
C. Vitamin D
D. Vitamin B1

100. What system includes glands that secrete hormones?
A. Circulatory
B. Endocrine

C. Digestive
D. Lymphatic

📝 **Answer Keys (51–100):**

51. B – Lysosomes digest cellular waste.

52. B – Glucose is a reducing sugar.

53. C – Homozygous = same alleles.

54. B – Standard gravity is 9.8 m/s^2.

55. B – Boyle's Law → P↑ V↓.

56. C – Cerebellum coordinates movement.

57. C – Ampere is current unit.

58. C – Boiling point is 100°C.

59. C – Vitamin K helps blood clot.

60. B – S phase is for DNA replication.

61. C – Hypothalamus regulates body temp.

62. B – Hemoglobin carries O_2.

63. A – Electrons = protons in neutral atoms.

64. C – Chlorine is a halogen.

65. C – Oxygen is most abundant in the body.

66. **B – F = ma is Newton’s 2nd law.**

67. **B – Thyroxine controls metabolism.**

68. **C – Lactic acid is produced anaerobically.**

69. **C – Fats = 9 kcal/g.**

70. **C – Dendrites receive signals.**

71. **A – Atomic number = protons.**

72. **B – Maslow made the pyramid.**

73. **D – O– = universal donor.**

74. **D – 0.5kg × 4m/s² = 2N.**

75. **C – Pancreas makes insulin.**

76. **C – UCS = reflex (unconditioned response).**

77. **C – Diaries are primary sources.**

78. **B – Right ventricle → lungs.**

79. **C – Acceleration = Δvelocity/time.**

80. **D – Lungs remove CO_2.**

81. **C – Chlorophyll traps light.**

82. **B – 46 chromosomes in humans.**

83. **C – Small intestine absorbs nutrients.**

84. **B – Ribosomes = protein builders.**

85. B – Autophagy = “self-eating.”

86. B – CH_4 = methane.

87. A – DNA = deoxyribonucleic acid.

88. C – pH 3 = strong acid.

89. B – Plasma = fluid part of blood.

90. A – Jupiter has strongest gravity.

91. A – Newton’s 1st: Inertia.

92. B – KE = $\frac{1}{2}mv^2$.

93. B – Mitochondria = powerhouse.

94. C – Carrying capacity = max population.

95. B – Avogadro’s number = 6.02×10^{23}.

96. C – Pulmonary vein brings O_2 blood.

97. C – Alexander Fleming.

98. C – Covalent = shared electrons.

99. B – Vitamin C prevents scurvy.

100. B – Endocrine system = hormones.

✨ Self-Reflection Page

“Why I Want to Become a Doctor”

Basta gusto ko maging doctor. Matagal ko na ‘tong pangarap—hindi dahil gusto ng iba, kundi dahil alam kong ito talaga ang gusto ko. Hindi pa ako nakakapag-exam, wala pa nga akong natetake na kahit isang subject. Pero ginawa ko ang reviewer na ’to para sa sarili ko. Para makapagsimula ako.

Alam ko, hindi ito perfect. At oo, baka hindi lahat ng nandito ay lumabas sa actual exam. Pero sana maunawaan ng makakabasa nito—ginawa ko ’to bilang reviewer ko sa entrance exam na hindi ko pa man natetake. Self-reviewer ko ’to. Ginawa ko ’to kasi gusto ko matulungan sarili ko maghanda. Kung makakatulong din sa iba, mas okay.

17 years na akong hindi nag-aaral. Pero ngayon, babalik ako sa simula. Wala akong special background, pero may pangarap ako. Gusto ko maging doctor. Yun lang alam ko sa ngayon—at sapat na ’yon para magsimula.

Hindi ako expert, hindi ako genius, pero may puso ako at may tiwala sa Diyos. Naniniwala ako na kahit dahan-dahan, makakarating din ako sa pangarap ko.

> ***“Magsisimula ako sa umpisa. Pero hindi ibig sabihin, dito lang ako matatapos.”***

Laban lang tayo. Good luck sa ating lahat.
– *Cloe Robite*

👩‍🎓 10. About the Author

Charl Ann Cloe Robite
Future BS Psychology Student (hopefully, soon!)
Customer Service Rep | Mama ni CJ | Aspiring Family Medicine & Nephrology Doctor

Hi! I'm Cloe. I'm not yet a student at ICCT, hindi pa nga ako nakakapag-entrance exam, but I'm working hard and praying that I'll get in. I plan to take BS Psychology as my pre-med course, and if it's the Lord's will, I also want to take the board exams and pursue medicine afterward.

Graduated pa ako ng high school noong 2007, so yes, matagal na akong huminto sa pag-aaral. But I believe it's never too late to follow a dream, lalo na kung ito ay para sa Diyos at para makatulong sa iba. Someday, I hope to use what I learn not just for a career, but for ministry, to help people both physically and emotionally.

I made this reviewer not because I already know everything, but because I want to prepare. I want to give myself a fighting chance. If this helps someone else too, salamat, Lord.

> ***"Hindi importante kung saan ka galing—ang mahalaga, kung saan ka papunta. Basta kasama si Lord, kakayanin."***